



**II. You will hear a man talking about a study he has investigated. You will hear the recordings twice. Read sentences 1-10, listen to the recordings and complete the sentences below. Write NO MORE THAN TWO WORDS for each answer. Transfer your answers to the column on the right. (10 points)**

1. The study discussed in the presentation researched the relationship between gender, working hours and .....among workers
2. Workers involved in the study were employed at a .....
3. The speaker believes that the study results are ..... inconclusive.
4. The various sub-groups were ..... in size.
5. Workers in the part-time group were mainly .....
6. The ..... of workers who agreed to take part in the study was disappointing.
7. Researchers were unable to .....the conditions in which workers filled out the questionnaire.
8. In future, the overall size of the ..... should be increased.
9. In future studies, workers should be prevented from having discussions with .....
10. Workers should be reassured that their responses to questions are .....

1.	
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10.	

## PART TWO: READING COMPREHENSION (20 POINTS)

### I. Read the text and complete task A and task B. (10 points)

#### A. For questions 1-5, circle the most appropriate option according to the text below.

1. The text
  - A. narrates the circumstances of finding a historical object.
  - B. explains how experts work.
  - C. criticizes the lifestyle of rich people.
  
2. The text focuses on
  - A. the common features of the two globes.
  - B. the differences between the geographical information on the globes.
  - C. the striking difference between the 16th century and 21st century approaches to map creation.
  
3. The egg globe is currently in possession of
  - A. a public library.
  - B. London Map Fair.
  - C. a person or persons unknown.
  
4. The experts mentioned in the text are mostly concerned with
  - A. the map creation technology.
  - B. the origins of the egg globe.
  - C. the status of the Italian rich.
  
5. The text looks like
  - A. a beginning of a tabloid piece.
  - B. a complete newspaper article.
  - C. a fragment from a scientific paper.

#### B. For statements 6-10, decide whether they are true (T), false (F) or the information is not given in the text (NO INFO).

6. Information coming from great explorers was probably used to make the 16th century globes. T / F / NO INFO
7. The egg globe offers an accurate image of North America. T / F / NO INFO
8. The size of the egg globe has changed in time. T / F / NO INFO
9. Wealthy Italian families often kept decorated ostrich eggs. T / F / NO INFO
10. Advanced technology has been used to examine the egg globe. T / F / NO INFO

## **Oldest globe to depict the New World may have been discovered**

A globe engraved on two joined parts of an ostrich egg has emerged as perhaps the oldest known globe to include the New World. The globe, dated 1504 and about the size of a grapefruit, is labeled in Latin and includes territories which were then considered absolutely exotic, such as Japan, Brazil and Arabia. North America is also there, depicted as a group of islands. The egg globe, whose owner remains anonymous, was purchased in 2012 at the London Map Fair from a dealer who said it had been part of an important European collection for decades.

The globe's single phrase, written above the coast of Southeast Asia, says in Latin, "Here are dragons." There is one other known globe on which the same phrase appears: the copper Hunt-Lenox Globe, dated around 1510 and housed by the New York Public Library. Before the ostrich egg globe surfaced, the copper globe had been the oldest one known to show the New World.

The two globes are remarkably similar. The lines and contours of the egg globe's territories and oceans, as well as the inscriptions, ideally match those on the Hunt-Lenox Globe. However, the egg's shape is slightly irregular, while the copper globe is a perfect sphere. Also, all inscriptions on the Hunt-Lenox Globe are readable while the markings around the equator of the egg globe, where the two halves are joined, cannot be deciphered. The egg has probably shrunk over time, and a loss in shell density was confirmed by using computed tomography. Apparently the two halves of the egg were cast separately, then joined with a type of glue that made the engravings around the equator hardly visible.

There is heated dispute as to who made the egg globe. The globe has no name on it, and some experts link it to the workshop of Leonardo da Vinci. They base this opinion on the fact that a drawing of an Indian Ocean ship on the globe is similar to a drawing by an artist well-acquainted with Leonardo. Other experts are much more doubtful, to the point of saying that the Leonardo connection is pure nonsense. But they do believe that someone from da Vinci's time collected knowledge from great travelers of the era, and made the egg globe for a rich Italian family. In that time period, the ostrich was a status symbol, and very rich people used to keep these huge exotic birds in their gardens. An ostrich egg globe would be a nice addition to their possessions.

In the times of free and unlimited access to satellite images and Google Street View, we mustn't forget that once people had to rely on globes and paper maps – and they surely were able to make the most of it.

**II. READING – ESP – AUTOMATYKA I ROBOTYKA (10 points)**

**Read the text and complete task A and task B.**

**A. Choose a sentence / clause (a - f) which best fits each gap (1-5). There is one extra option which cannot be used. Place appropriate letters in the gaps in the text. (5 points)**

- a) But there are certain places these machines can't easily access because of strong currents.
- b) as it is tethered to an external power source.
- c) Moving on legs will hopefully prove more stable, and won't stir up as much debris as propellers.
- d) which is an unsound concept.
- e) This is all accomplished from the remote control station inside one of the shipping containers.
- f) which are ill-equipped to deal with strong tidal currents in shallow seas.

**Huge Six-Legged Robot Crabster Goes Swimming**

The Crabster CR200, a huge six-legged underwater robot, took the plunge earlier this month for the first time. It is an alternative to propeller-driven remotely-operated vehicles (ROVs) and autonomous underwater vehicles (AUVs), (1)..... Most ROVs and AUVs rely on propellers, which allow them to maneuver swiftly and dive to great depths. (2)..... To overcome this hurdle, researchers at the Korean Institute of Ocean Science and Technology (KIOST) sought inspiration not from fish but from legged sea creatures like crabs and lobsters. The result was Crabster.

Unlike ROVs and AUVs, the Crabster is designed to be lowered by crane to around 200 meters below the surface, where it will walk along the sea floor on six legs powered by 30 joints. (3)..... And like a crab or a lobster, the robot's two front legs are equipped with manipulators that can grasp objects that can be stored in a frontal compartment. The researchers also designed the robot's shell to deflect strong currents by adjusting its overall posture.

It takes four people to operate the Crabster. The pilot controls the robot's walking and posture while a co-pilot works its manipulators, cameras, and lights. A navigator plans its movement and keeps track of its position, while a sonar engineer monitors the scanning sonar and other sensors. (4).....

The Crabster can remain on the sea floor for days at a time if necessary, (5)..... It's equipped with a high resolution scanning sonar, acoustic camera, acoustic doppler current profiler (ADCP), and several optical cameras. The goal is to explore submerged ships in currents moving at 1.5 meters per second, which are strong enough to rip the oxygen mask off of a scuba diver's face. In future tests, the plan is to assess all of Crabster's capabilities, as well as identify possible upgrades and then early next year, to send the robot to investigate a submerged ship in a strong tide.

*Source: adapted from www.spectrum.ieee.org*

**B. For questions 6-10 find the words in the text that correspond to the definitions. (5 points)**

- 6. an option (par.1) .....
- 7. an obstacle (par.1) .....
- 8. to hold (par.2) .....
- 9. to modify (par.2) .....
- 10. improvements (par.4) .....

**PART THREE: GRAMMAR AND VOCABULARY. (20 points)**

**I. For questions 1-5, complete the second sentence so that it has a similar meaning to the first sentence. Use the words written in bold. Write between two and five words in each case. Use words from the original sentence wherever possible. (5 points)**

1. It is prohibited to touch anything in this room. **MUST**  
You ..... in this room.
2. Research and Development is Tom's responsibility in this company. **CHARGE**  
Tom is ..... Research and Development in this company.
3. Many complex elements are included in this machine. **CONSISTS**  
This machine.....many complex elements.
4. They started the company in 1997. **SET**  
The company .....1997.
5. "How about going to the cinema tonight?" said Anne. **SUGGESTED**  
Ann..... to the cinema.

**II. For questions 1-5, circle the correct answer: a, b, c, or d. (5 points)**

1. You \_\_\_\_\_ let the cats sleep on my clean shirts. Look. They're covered in hairs.  
A) mustn't                      B) don't have to                      C) doesn't have to                      D) ought to
2. Sally: \_\_\_\_\_ do you take the dog for a walk? Jilly: Oh. Twice a day.  
A) With what frequency                      B) When                      C) What                      D) How often
3. Since the beginning of the storm several trees \_\_\_\_\_ down.  
A) have fallen                      B) fell                      C) have felt                      D) have fall
4. After her parents were killed she \_\_\_\_\_ by her uncle.  
A) was grown up                      B) was brought up                      C) was brought D) brought
5. The room is ten meters \_\_\_\_\_.  
A) broad                      B) width                      C) wide                      D) wide-ranging



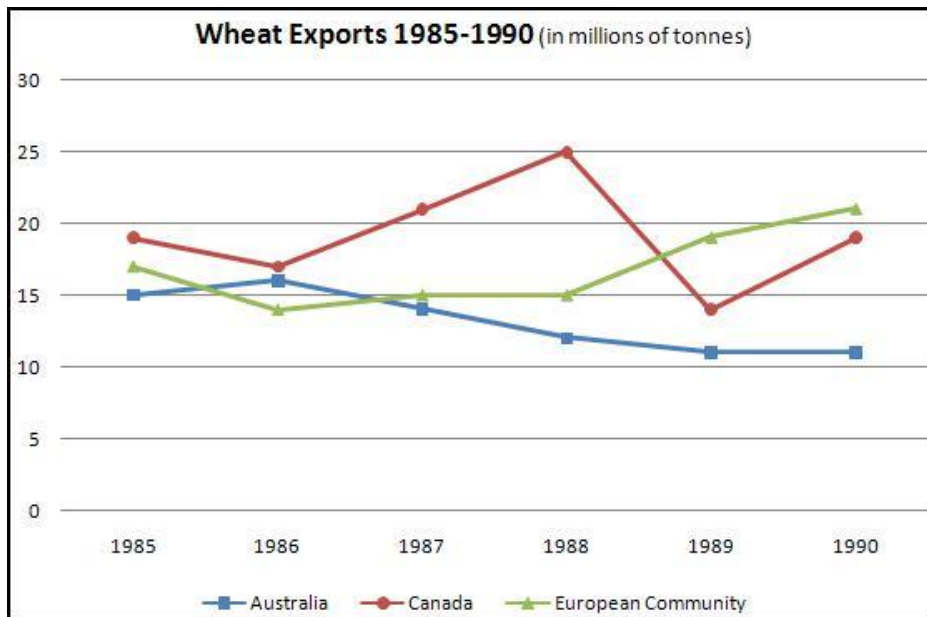
## PART FOUR: WRITING (20 points)

Choose ONE of the following topics. Write between 150 and 200 words.

### I. GUIDED WRITING – GRAPH INTERPRETATION

Imagine you participate in a university research project which examines exports from various countries. Your lecturer has asked you to write an analysis of wheat exports. In about 150-200 words, describe and interpret the graph shown below. Use appropriate vocabulary and different expressions. Use tenses consistently. In your description:

- describe the trends shown in the graph
- compare the trends
- give possible reasons for the changes in the trends, e.g. weather conditions



[https://www.google.pl/?gfe\\_rd=cr&ei=yI7xVPvcNlu1-Qbt6IHACw&gws\\_rd=ssl#q=wheat+exports+1985-1990+graph](https://www.google.pl/?gfe_rd=cr&ei=yI7xVPvcNlu1-Qbt6IHACw&gws_rd=ssl#q=wheat+exports+1985-1990+graph)

### II. GUIDED WRITING – ESP – AUTOMATYKA I ROBOTYKA

You have been assigned a project which includes writing a short text in English. In about 150-200 words, discuss mechanical and non-mechanical fixings. In your description cover the following aspects:

- Compare mechanical fixings to non-mechanical fixings
- Give at least two examples of each type of fixing
- Describe the advantages and disadvantages of different types of jointing methods



**TASK: .....**

- 1 .....
- 2 .....
- 3 .....
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- 11.....
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- 22.....
- 23.....
- 24.....
- 25.....
- 26.....
- 27.....
- 28.....

**How many words have you written? \_\_\_\_\_**

Task Achievement 0-5points	Coherence & Cohesion 0-5points	Vocabulary 0-5 points	Grammar 0-5 points	Total

**B2 LEVEL ENGLISH EXAM test key**  
**LISTENING I (10 points)**

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
T	T	NO INFO	F	F	T	F	NO INFO	T	F

**LISTENING II (10 points)**

1. **JOB SATISFACTION**
2. **CALL CENTER/ CALL CENTRE**
3. **STATISTICALLY**
4. **UNEQUAL/VARIED/DIFFERENT**
5. **FEMALE/WOMEN**
6. **RESPONSE/NUMBER**
7. **CONTROL**
8. **SAMPLE/ GROUP**
9. **THEIR COLLEAGUES / OTHER COLLEAGUES/  
COLLEAGUES/WORKMATES/WORK FRIENDS/EACH OTHER (accept any of them)**
10. **CONFIDENTIAL**

**READING I (10 points)**

- |      |            |
|------|------------|
| 1. A | 6. T       |
| 2. A | 7. F       |
| 3. C | 8. T       |
| 4. B | 9. NO INFO |
| 5. B | 10. T      |

**READING II - ESP**

**A. (5 points)**

1. F
2. A
3. C
4. E
5. B

**B. (5 points)**

1.	2.	3.	4.	5.
an alternative	a hurdle	to grasp	to adjust	upgrades

**GRAMMAR AND VOCABULARY**

**I Grammar – transformations (5 points)**

1. You must not touch anything in this room.
2. Tom is in charge of Research and Development in this company.
3. This machine consists of many complex elements.
4. The company was set up in 1997.
5. Ann suggested going to the cinema.

**II Grammar – multiple choice (5 points)**

1. A, 2.D, 3.A, 4.B, 5.C

**III. DEFINITIONS – MATCHING. ESP**

1	2	3	4	5	6	7	8	9	10
G	I	F	K	C	D	A	M	J	L