

## מדינת ישראל

משרד החינוך

- א. סוג הבחינה: בגרות לבתי ספר על-יסודיים  
ב. בגרות לנבחני משנה  
ג. בגרות לנבחנים אקסטרניים  
מועד הבחינה: חורף תשע"ה, 2015  
מספר השאלון: 407,016108

# אנגלית

## שאלון ז'

(MODULE G)

### גרסה א'

### הוראות לנבחן

א. משך הבחינה: שעה וחצי

ב. מבנה השאלון ומפתח ההערכה: בשאלון זה שני פרקים.

פרק ראשון – הבנת הנקרא – 60 נקודות  
פרק שני – משימת כתיבה – 40 נקודות  
סה"כ – 100 נקודות

ג. חומר עזר מותר בשימוש: מילון אנגלי-אנגלי-עברי

אז: מילון אנגלי-עברי / עברי-אנגלי

אז: מילון אנגלי-אנגלי-ערבי

אז: מילון אנגלי-ערבי / ערבי-אנגלי

נבחן "עולה חדש" רשאי להשתמש גם במילון דו-לשוני: אנגלי-שפת-אמו / שפת-אמו-אנגלי.  
השימוש במילון אחר טעון אישור הפיקוח על הוראת האנגלית.

ד. הוראות מיוחדות:

- (1) עליך לכתוב את כל תשובותיך בגוף השאלון (במקומות המיועדים לכך).
- (2) כתוב את כל תשובותיך באנגלית ובעט בלבד. אסור להשתמש בטיפקס.
- (3) כתוב את הנוסח הסופי של מטלת הכתיבה בעמוד 7. אם תצטרך, תוכל להשתמש גם בעמוד 8.
- (4) בתום הבחינה החזר את השאלון למשגיח.

הערה: על כתיב שגוי יופחתו נקודות מהציון.

**ההנחיות בשאלון זה מנוסחות בלשון זכר ומכוונות לנבחנות ולנבחנים כאחד.**

## בהצלחה!

/המשך מעבר לדף/

**PART I: ACCESS TO INFORMATION FROM WRITTEN TEXTS (60 points)**

Read the article below and then answer questions 1-8.

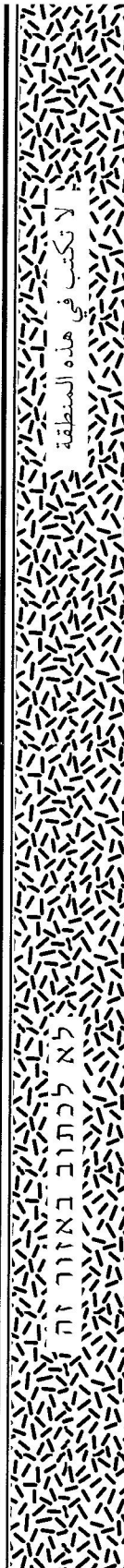
**FARMING REACHES NEW HEIGHTS**

One of the greatest challenges the world will face in the next few decades is ensuring a sufficient supply of food for the entire global population. This will be no easy task since, for various reasons, the amount of land suitable for farming is decreasing. A number of imaginative solutions have been suggested, 5 from farming on artificial islands out at sea to developing faster-growing plants that yield several harvests a year. But one idea is now attracting considerable interest: growing food crops in "vertical farms" – tall buildings in and around cities, where each storey serves as a "field."

Vertical farming was pioneered by Professor Dickson Despommier, an 10 environmental scientist at New York's Columbia University, who has long been worried about the threat of future food shortages, and interested in finding ways to prevent them. The idea was developed, he explains, following a project done by his students on the benefits of rooftop gardening in the city. One group suggested replacing the shrubs and flowers usually grown on rooftops with 15 fruit and vegetables. While the possibility appealed to Despommier, he realised rooftop gardens could never provide a large enough area to grow a significant amount of food. A better solution, he believed, would be vertical farms that would occupy entire buildings.

Setting up vertical farms in cities makes perfect sense when you consider the 20 recently published data predicting a sharp increase in urban populations. By 2050, there will be some ten billion people on the planet, up from seven billion today, and 70% of them will live in cities. Farming within urban centers, says Despommier, will not only ensure a reliable supply of food, but will also mean that it arrives fresh in the shops and that transportation costs are significantly 25 reduced. Moreover, farming in buildings will protect crops from exposure to extreme weather conditions such as heat waves or severe storms, and keep the use of pesticides to a minimum.

/המשך בעמוד 3/



A number of experimental vertical farms are currently in operation, and have demonstrated that the idea is indeed practical. But concerns have been voiced about the high cost of running the farms, caused by their dependence on artificial light for growing plants indoors. Some new farm designs now under consideration deal with the problem by including large windows to enable maximum use of natural light. Others do so by incorporating solar panels, which provide cheaper electricity.

Meanwhile, two commercial vertical farms have opened in Kyoto and Chicago, and are already selling produce to the public. We are still a long way, however, from the widespread use of vertical farming envisioned by Despommier. For that to be achieved, farming specialists, city planners, architects, and investors must work together to put large-scale plans into action. Only then might we see a revolution in farming, with cities across the globe having no shortage of fresh food, regardless of the climate or availability of agricultural land.

**QUESTIONS** (60 points)

Answer questions **1-8** in English according to the article. In questions **1, 4, 7** and **8**, circle the number of the correct answer. In the other questions, follow the instructions.

1. From lines 1-8 we can understand that the purpose of vertical farms is to (-).
  - (i) produce new types of crops
  - (ii) provide more work for farmers
  - (iii) help prevent food shortages
  - (iv) develop higher-quality foods

(8 points)
  
2. What do we learn from lines 9-18? Give ONE answer.

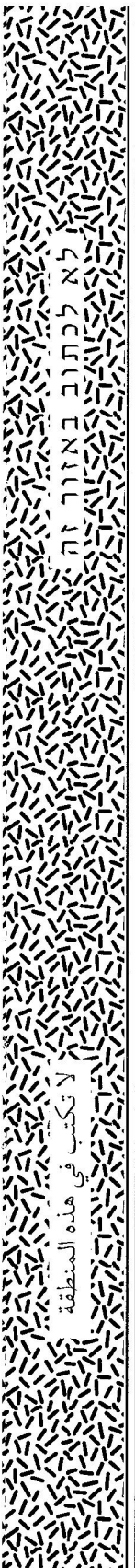
COMPLETE THE SENTENCE.

We learn why Despommier .....

.....

(8 points)

/המשך בעמוד 4/



3. In line 17, vertical farms are mentioned as "a better solution." Better than what?

ANSWER:.....  
(8 points)

4. In lines 19-27 the writer explains why (-).

- i) there will be a significant increase in the size of cities
- ii) cities have begun setting up vertical farms
- iii) there may be a need for vertical farms in the future
- iv) the changes will have to take place by 2050

(7 points)

5. COMPLETE THE SENTENCE.

In lines 19-27, minimal use of pesticides is mentioned as one of the .....

.....  
(7 points)

6. According to lines 1-27, what might lead to food shortages in the future?

Give ONE answer.

ANSWER:.....  
(7 points)

7. The purpose of all the new farm designs mentioned in lines 28-34 is to help reduce (-).

- (i) the need for experimental vertical farms
- (ii) the use of electricity in vertical farms
- (iii) the amount of light required to grow plants indoors
- (iv) the cost of running vertical farms

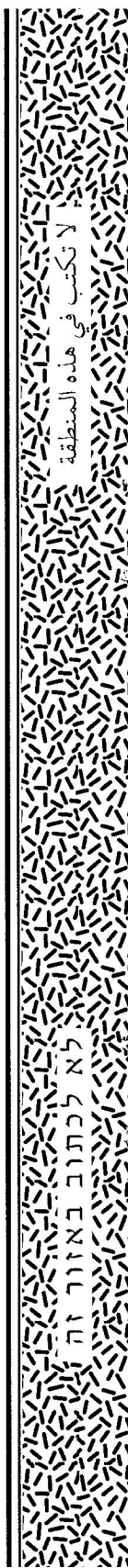
(8 points)

8. What is explained in lines 35-41?

- (i) Which experts are currently involved in vertical farming.
- (ii) Why widespread use of vertical farms is not possible yet.
- (iii) What objections there might be to vertical farming.
- (iv) Where there are plans to build vertical farms.

(7 points)

/המשך בעמוד 5/



**PART II: WRITTEN PRESENTATION (40 points)**

Write 120-140 words in English on the following topic.

9. Do you think it's a good idea for teenagers to have an after-school job?

Write a composition giving reasons for and / or against working after school.

**בהצלחה!**

Use this page and the next (nos. 5-6) for writing a rough draft.

לא לכתוב באזור זה

لا تكتب في هذه المنطقة

