

Part I - READING COMPREHENSION (A)

Read the following passage carefully and answer the questions in English

Extreme Makeover: Reinventing the Parking Lot

I

Drivers often say that New York's Long Island Expressway is one big parking lot. Now people are thinking of how to use thousands of dunams of parking lots on Long Island in a better way. Imagine what you could do with all of that land. The Long Island Newspaper is looking for ideas how to **"Build a Better Suburb"**.

II

- 5 The parking lots on Long Island are close to shops, restaurants and commuter trains, making them the best areas for socializing. Creating 90,000 units of highly populated housing on this land could save space. "Parking lots are the largest under-utilized land in the country," says Galina Tachieva, **an urban planner**. "We can change the single use of parking lot areas to **multi- purpose use** helping to **renew the malls and streets** of America.

III

- 10 Today many California train-station parking lots have joint office-and-residential buildings. Some companies installed solar panels above their parking lots to create solar fields that can produce enough **energy to power 68 homes**. Other projects are low technology and low cost. An organization in Portland has replaced 3,250 square meter of asphalt with flowers and vegetables. In Camden, a parking lot is being made into a town square. But where is everybody
15 going to park? In new underground or multi-story garages.

IV

"Re-thought" parking lots can have big environmental benefits too. Wellesley College turned a 175-space parking lot - located on chemically toxic land - back into countryside, with wetlands to help handle excess storm water. This gave the new landscape an ecological function. Now the parking is in a garage. Multi-purpose use of land is only one challenge. The second is to get Americans to start thinking differently. To reduce urban spreading we may even start leaving the car at home.

(adapted from Time Magazine)

QUESTIONS

1. Answer the following questions in *English*

A. What do people want to change in Long Island? (paragraph I)

B. What could parking lots be used for? (paragraph II)

C. Complete the following sentence in **Hebrew or Arabic**: (paragraph III)

Instead of parking lots people will park in _____

D. List three examples of the results of renewing parking lots in California: (paragraph III)

 (1)

 (2)

 (3)

E. Answer the following :

(1) Circle either **True** or **False** : (paragraph III)

"Multi-purpose development is always expensive." **True / False**

(2) Translate a sentence from the text into **Hebrew or Arabic** which supports your answer: (תרגם משפט מהטקסט שתומך בתשובה שבחרת)

F. How is the new use of Wellesley College's parking lot different from other uses mentioned in the text? (paragraph IV)

G. Complete the following sentence in **Hebrew or in Arabic**: (paragraph IV)

If Americans want to help keep cities from growing they

H. Translate the following words and expressions into **Hebrew or Arabic** according to their meaning in the context. These words and expressions appear in bold type in the text.

(i) **Build a Better Suburb** (line 4)

(ii) **an urban planner** (line 8)

(iii) **multi- purpose use** (line 9)

(iv) **renew the malls and streets** (line 9)

(v) **energy to power 68 homes** (line 12)

Part II - READING COMPREHENSION (B)

Read the following passage carefully and answer question 2 in English.
Hebrew or Arabic will not be accepted in this part of the test.

Transporting Heavy Weights Through The Air

I

Transporting large pieces of equipment has always been a challenge. Roads and railways do not reach everywhere. Even when they do, big heavy building projects need to be moved in pieces and to be put together at the final location. Airplanes are limited in what they can carry and need runways to land. Heavy-transport helicopters solve some of these problems but they
5 can carry only up to 29 tons. And the huge helicopter rotors create a powerful downdraft that makes handling the cargo difficult. Now, Skylifter, an Australian firm, has found the solution.

II

The company is developing a piloted vehicle able to carry up to 150 tons, as far as 2,000 km, at the speed of 83 kilometers per hour. This will enable the craft to transport entire buildings to problematic places. Skylifter's first special feature is its disk-shape: like a round balloon the
10 craft is not influenced by where the wind blows from. This makes it easier to load and handle cargo in places where there is wind. In addition, because it is flat, the craft doesn't behave like a sail and is easier to steer. Finally, the flying-saucer shape acts as a parachute, making greater control possible while landing.

III

A second special feature that Skylifter uses is a special propeller. Its blades are round instead
15 of flat. Because the blades are round the propeller moves faster, increases the force of its movement and changes the direction of the craft's movement. As a result, the special propeller supplies both power and steering at the same time. The third special feature is the control section which is placed far below the disk so that the craft's centre of gravity is downward. This makes the craft very stable and big stabilizers aren't needed.

IV

- 20 Skylifter has built a remote-controlled test version, named Betty, to show how it will work. Betty's helium-filled disk (3 meters across) can carry half a kilo. Another model called Vikki is 18-metres wide and is tied to the ground at all times because it doesn't have a propulsion system. Engineers are now working on a 23-metre unmanned model called Nikki. And they plan to construct a 150-metre piloted prototype, named Lucy, over the next three years. If that
- 25 works, Skylifter's craft may bring help to stranded disaster victims and ships in trouble at sea.

(adapted from the Economist)

QUESTIONS

2. Answer the following questions. (30 points)

A. Match [A] to [B] according to the text.

A	B
a. the size of an unmanned test version	(i) 2000 km
b. the distance the future craft can travel	(ii) 150 tons
c. the weight the future craft can carry	(iii) 29 tons
d. the weight the heavy transport helicopter can carry	(iv) 23 meter

(a) _____ (b) _____ (c) _____ (d) _____

B. Tick (✓) the correct answer according to paragraph 1:

Transporting large pieces of equipment

_____ (a) is a new problem.

_____ (b) is an old problem.

_____ (c) is not difficult.

C. Tick (✓) the correct answers according to paragraph I.

Heavy-transport helicopters

- _____ (i) are better than airplanes for transporting heavy equipment.
- _____ (ii) have no limitations on what they can carry and to where.
- _____ (iii) create wind currents which make handling cargo difficult.

D. List three advantages of the craft being disc shaped according to paragraph II

- (1) _____
- (2) _____
- (3) _____

E. Tick (✓) the **THREE** correct answers according to paragraph III and IV.

- _____ (i) The round blades of the new craft help it to move faster.
- _____ (ii) The special propeller supplies both power and steering.
- _____ (iii) The new craft isn't stable and needs stabilizers.
- _____ (iv) The new craft won't be able to fly over the ocean.
- _____ (v) Skylifter has made several models of the new craft.
- _____ (vi) The first prototype will be ready in 5 years.

F. Read the main ideas below.

Write the paragraph number that each main idea refers to.

Main Idea	Paragraph
1. The Advantages of the Disc Shape	
2. Different Models of the New Craft	
3. The Transport Limitations of Planes and Helicopters	
4. Why Skylifter Works So Well	

Part III – INSTRUCTIONS

3. Read the problems below and match them to the causes or remedies that follow. (20 points)

Buying A Car Battery

Problems:

- 1) How does an electric car battery work?
- 2) What should I consider when buying a battery?
- 3) Why is it important to remove the ground wire first when replacing the battery?
- 4) How can I know that the battery is new?
- 5) What is reserve capacity?
- 6) How do I safely jumpstart my battery?
- 7) My car won't start. How do I know that I need a new battery?
- 8) What can excessive heat do to a battery?

Solutions:

- a) Starting a dead battery is not difficult but you must be careful not to switch the cables.
- b) You may cause a spark and explosion if the ground wire isn't taken out at the beginning.
- c) The size of your original battery and the power your car needs determine which to buy.
- d) Hot temperatures will deteriorate a battery's life by corroding the positive grids.
- e) How much power a vehicle has without a working fan- belt is its reserve capacity.
- f) A battery stores energy in chemical form that can be released on demand as electricity.
- g) Many problems keep a car from starting; stores that sell batteries do battery testing free.
- h) A decal on the side of the battery container records the month and year the battery was made.

Write your answers here:

1	2	3	4	5	6	7	8