LESSON 1: RECENT DEVELOPMENTS IN IT

PART 1: VOCABULARY

Extra Exercises

Exercise 1: How do you say these words in English

1. Quần áo thông minh
2. Ghế thủy lực cho các trò chơi thực tế ảo
3. Giống con người
4. Mạng nội bộ chiếm ưu thế
5. Thiết bị theo dõi sức khỏe cá nhân
6. Trợ lý ảo điện tử
7. Nhận dạng qua tần số vô tuyến
8. Trí tuệ nhân tạo
9. Robot cứu hỏa
10. Tốc độ terabit/giây giới hạn trên cáp quang

11. Cách mạng hóa
12. Thẻ nhận dạng qua tần số vô tuyến
13. Thiết bị robot bơi trong mạch máu
14. Kết nối trực tiếp giữa não người và máy tính
15. Điện toán đám mây
16. Người điện tử
17. Chuỗi khối
18. Phát triển ứng dụng di động
19. Mã vạch
20. Sự hội tụ

Exercise 2: Look at the transcriptions and write the correct words

1. /ˈfaɪərfaɪting ˈrəʊbɒt/	
2. /ˈmoʊbl ˌæpləˈkeɪʃn dɪˈveləpmənt/	
3. /ˌɑːtɪfɪʃl ɪnˈtelɪdʒəns/	
4. /ˈreɪdiəʊ ˈfriːkwənsi	
5. /ɪˌlekˈtrɒnɪk ˈvɜːtʃuəl əˈsɪstənt/	
6. /kætʃ ʌp wɪð/	
7. /sərˈveɪləns/	
8. /ˈreɪdiəʊ ˈfrikwənsi tæg/	
9. /kənˈvərdʒəns/	
10. /ˈɪməˌteɪt/	

Exercise 3: Complete the sentences with a suitable word beginning with a given letter

1. **A**_ _ _ _ _ _ _ _ _ **I**_ _ _ _ _ _ _ _ _ _ _ is often referred to a branch of science which deals with helping machines find solutions to complex problems in a more human-like fashion.

2. This is a **f**_ _ _ **f**_ _ _ _ _ _ **r**_ _ _ _ made to detect fire by means of flame sensors, going toward it and put the fire off by water.

3. A **h**_ _ _ _ _ _ _ robot is a robot with its body shape built to resemble the human body.

4. **C**_ _ _ _ **c**_ _ _ _ _ _ _ _ _ is the delivery of different services through the Internet.

5. Some mobile devices even come standard equipped with **v**_ _ _ _ _ _ **a**_ _ _ _ _ _ _ _ _, such as Apple's Siri, Cortana, or Google Assistant.

6. Just as children develop the ability to **i**_ _ _ _ _ _ the goal of an action rather than a specific act, can we construct robots that are capable of making this inference?

7. A **b**_ _ _ _ _ _ reader consists of a <u>scanner</u> , a decoder (either built-in or external), and a <u>cable</u> used to connect the reader with a computer.

8. More and more people claim that their **p**_ _ _ _ _ _ _ **h**_ _ _ _ _ **m**_ _ _ _ _ _ _ _ _ device saved them from a tragic situation.

9. Artificial intelligence may **o**_ _ _ _ _ _ _ human smarts in 16 years.

10. There are some technologies out there that will **r**_ _ _ _ _ _ _ _ _ _ _ _ the way we live in the very near future.

PART 2: GRAMMAR

Extra exercises

Exercise 1: Use the correct form of the words in the bracket to talk about changes

1. Why _____ companies _____ robots over to android? (move)

2. With the robotics industry developing every day the technology _____ constantly _____. (change)

3. Using Android as the operating system for robots _____ increasingly common. (become)

4. With the power of Google's Android, robots _____ more and more secure. (become)

5. With android starting to become a popular robotics development platform the ability to share code between platforms _____. (expand)

6. It seems like companies _____ to move their robots onto the android platform for some very good reasons. (choose)

7. Robots and artificial intelligence _____ life easier for humans. (make)

8. _____ Robots _____ Humans? Or _____ Humans _____ Robots? (become)

Exercise 2: Put the correct form of either "can" or "be able to" for each sentence

1. I haven't _____ concentrate recently at work. I don't know what it is.

2. When he was only 2, my friend Lee _____ speak quite well.

3. I have to go to a seminar about Artificial Intelligence tomorrow night so I _____ (not) come to the party. I'm very sorry.

4. This telephone is terrible. I _____ (not) hear you at all.

5. When the car drove into the lake, one of the passengers _____ (not) open the door and had to be rescued.

6. Despite the arrival of the storm, they _____ finish the football match.

7. When I was very young, I used to _____ touch my toes, but I can't now!!

8. The house was totally empty all day yesterday and I _____ finish the book I was reading.

Exercise 3: Find the mistake in each sentence and correct it

1. With Android being <u>maintained</u> (A) by Google any future security beaches in the operating system will be <u>fixed</u> (B) and robots will <u>able to</u> (C) get updated security just by <u>updating</u> (D) the version of Android.

2. Artificial intelligence <u>are becoming</u> (A) more and more <u>available</u> (B) to society, either <u>directly</u> (C) or <u>indirectly</u> (D).

3. <u>There's</u> (A) no doubt <u>that</u> (B) artificial intelligence can <u>helps</u> (C) Customer Service <u>immensely</u> (D)

4. When it <u>comes</u> (A) to your health — you would most <u>definite</u> (B) want the <u>best</u> (C) of the best health monitoring device <u>out</u> (D) there.

5. Robots and computers <u>will</u> (A) be able to <u>doing</u> (B) many jobs that <u>are</u> (C) currently <u>done</u> (D) by humans.

6. Scientists <u>predict</u> (A) that <u>in</u> (B) the twenty years time <u>nearly</u> (C) everyone will have <u>living</u> (D) in smart houses.

7. In 2021 we're <u>like</u> (A) to see an <u>increased</u> (B) emphasis <u>on</u> (C) measures <u>designed</u> (D) to increase the transparency of AI.

8. Artificial intelligence (AI) is <u>continued</u> (A) its migration <u>out of</u> (B) the research lab and <u>into</u> (C) the world <u>of</u> (D) business.

PART 3: READING
Exercise 1: Read the text and decide whether the following sentences are True or False
Home robots on sale in Japan

A Japanese manufacturer unveiled a futuristic home robot on September 16, which may consign housework to be a thing of the past – for the rich. Mitsubishi Heavy Industries started selling its Internet-linked, meter-high Wakamaru robot with an astronomic price tag of $150,000. Just 100 of the home helps will initially be available. The robot is the brainchild of renowned Japanese designer Toshiyuki Kita, who said his creation was "designed in the shape of a human being so that it is not considered simply a machine". He added the robot has an "independent personality" and that its "cute expression and form make it appear friendly to everyone." Wakamaru is the end product of a collaboration with six other companies. The robot packs an impressive array of features. It is capable of recognizing up to ten individuals by name, it has a vocabulary of 10,000 words and can navigate its way around the house. The Wakamaru website cites three major functions that will enrich and aid the lives of its users: "He enables natural and enriched communication in accordance with real-life situations, he acts autonomously according to his own life rhythm, and he provides information and service by accessing the Internet." This means he can remind you to exercise, take phone messeges and greet friends when they visit. Wakamaru is an innovative marvel of gadgetry and an impressive feat of robotics. However, it needs a commensurate innovation in price reduction to make it adordable by all.

1. You can now buy a robot in convenience stores in Japan.

2. A new robot is on sale in Japan for $150,000.

3. The robot has an independent personality and a cute expression.

4. The robot has a vocabulary of 10,000 words.

5. The robot can help its owners become rich and live longer lives.

6. The robot will remind you to exercise.

Exercise 2: Read the passage and answer the questions with NO MORE THAN THREE WORDS

As you could see, running is something quite difficult for robots. In order to make it easier, engineers are trying to copy bugs to create robots that are more stable and use less energy when they move. Researchers at Oregon state university are using studies of guinea hens and other animals such as cockroaches to learn more about the mechanics of their running ability, with the goal of developing robots that can run easily over rough terrain. Most people find cockroaches repulsive, but not John Schmitt. A mechanical engineer at Oregon state university, Schmitt is using the leggy pests as a model for futuristic robots that can run effortlessly over rough terrain. Current robots require too much computing power to get around, Schmitt explained. "We are trying to create robots that are more stable and take less energy." He said. Unlike other creatures, cockroaches don't think about how they are going to run. When a roach comes across bricks that are three times as high as its hip, it only slows down by 20 percent. The legs move by instinct, not by reflex. Schmitt is working on designing

robot legs that can do the same. "if you wanted surveillance, you'd build a legged robot, and scatter them around. They will communicate with each other and set up a reconfigurable wireless network." Schmitt said. Insect-like robots could also be useful explorers on Mars and other off-world terrains. "Mars rovers have problems with rock." Schmitt said. "If you have something as small as cockroaches, small rocks won't be a problem."

1. Who are attempting to copy bugs to develop robots with more stable movement?

2. What do many people find about cockroaches?

3. What are "leggy pests"?

4. What helps current robot to move around?

5. What problems on Mars that scientists are facing?

PART 4: SPEAKING

Activity 1: Making predictions

- Work in pairs

- Make predictions about future development of these fields:

1. Cloud computing

2. Shopping

3. Health care

4. The internet

5. Machine learning

Sample:

Many people nowadays are buying goods online instead of going to the shops.

Activity 2: Free talk

- Work individually

- Talk about a recent development in IT that has impressed you most

Suggested questions:

1. What is it?

2. When was it invented?

3. What is it used for?/what is its application?

4. How does it influence on society?

5. Why does it impress you?

PART 5: WRITING

Exercise 1: Write sentences similar in meaning to each of these predictions with IT in subject position

1. There's a chance we will develop alternatives to silicon. (possible)

……………………………………………………………………………..

2. I really don't think we will have replaced the motor car before 2020. (very unlikely)

……………………………………………………………………………..

3. I'm almost sure most people will use colour laser printers in the next few years. (highly probable)

……………………………………………………………………………..

4. I'm definite we'll have more virtual personalities on the Web. (certain)

……………………………………………………………………………..

5. We might adopt Bluetooth as a standard for wireless applications. (possible)

……………………………………………………………………………..

Exercise 2: Write about a recent development in IT that has impressed you most

Suggested questions:

1. What is it?
2. When did it invented?
3. What is it used for? / What is its application?
4. How does it influence on society?
5. Why does it impress you?