招生學年度	103	招生類別	碩士班
系所班別	資訊工程學系碩士班（資工乙組）		
科目名稱	英文		

英翻中，每段分數如標示：

(一)

(1.1) The home of the future — complete with helper bots and automated appliances — has long been the stuff of science fiction. The tech world is determined to make it a reality. (10%)

(1.2) Soon, the vision goes, everything from garden products to bathroom appliances will be controlled by the touch of a smartphone. Without setting foot in the door, a person headed home could turn off the security system and turn on the shower, and begin preheating the oven. (10%)

(1.3) The concept of outfitting everyday objects with sensors and connecting them to the web, often called the Internet of Things, has been brewing for several years. But the announcement last week that Google was paying $3 billion to acquire Nest, a maker of Internet-connected home products, put a sort of Good Housekeeping seal of approval on this nascent market. (10%)

(二)

(2.1) By now, you're probably familiar with IT's new business mindset: that of a highly efficient service provider. Cloud services, consumerization and BYOD are just a few of the business-driven topics that are currently generating buzz. (10%)

(2.2) However, another major trend has begun to silently transform the data center by providing IT equipment with an intelligence all its own. It turns out that, in order to truly modernize IT, your application servers, networks, data storage systems, and even end-user devices must live intelligently—often, independently. (10%)

閱讀下面的文章並回答問題：

(三) One day a 3D printer, using a mix of materials, will be able to create body armor for U.S. soldiers that is more lightweight and stronger than anything could be made with traditional manufacturing and materials today.

That's the word from researchers at the Lawrence Livermore National Laboratory, who are working to revolutionize 3D printing, as well as the way that companies build products ranging from jet engines and satellites to football helmets.

Eric Duoss, a materials scientist and engineer, and other scientists at the Lawrence Livermore National Lab, are working to advance 3D printing, as well as the way

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companies think about manufacturing. They're also studying the physics and chemistry at the base of the process in order to better understand how manufactured parts will stand up to conditions such as heat and stress, so they can predict a product's behaviors and performance.

"It's going to revolutionize manufacturing," said Eric Duoss, a materials scientist and engineer at the lab. "It's going to revolutionize it in terms of manufacturing itself. It's about the ability to tailor properties and achieve property combinations that would have been previously impossible to create."

Additive manufacturing, or 3D printing, is the process of creating a three-dimensional object by laying down successive layers of material. The technology has received wide media attention over the past year with 3D printers that build handguns, phone parts and toothbrushes among other things.

Duoss emphasized that the work they're doing won't change the landscape of 3D printing, but it will change the way many companies think about creating their products.

"Hopefully it will be a new way of manufacturing with a lot more possibilities and less cost, time and real estate needed to manufacture things," he said.

Pete Basiliere, a research director at Gartner Inc., said many universities and labs are working on 3D printing, but Lawrence Livermore has the resources to push the technology ahead.

"The key is that this opens the door for designers to create items that were not possible before," Basiliere said. "Engineers and designers would have another set of tools that enable them to be more creative in coming up with a product."

(3.1)請說明這篇文章的大概意思。(10%)

(3.2)文中提到那些東西可以用 3D printer 來產生？(10%)

(3.3)文中的一句話" the work they're doing won't change the landscape of 3D printing, but it will change the way many companies think about creating their products."中，何謂"change the landscape"? (5%)

解釋下列英文的涵義和其應用，每題五分：

(四) Big Data (五) Open Data (六) Virtualization (七) Wearable Technology (八) Social Network