Đề thi thật 1: The development of travel under the ocean

For millennia, humans have been intrigued by what lies beneath the sea and although submarine travel was attempted from time to time, it did not become commonplace until the middle of last century. Several clever and innovative people had experimented with designs for submersible boats before then, but there was much loss of life and little success.

There had long been use of a primitive diving bell for exploratory purposes, but it was as a war machine that the submarine came into its own. The first development in the history of American submarines was a small submersible with a hand-cranked screw-like oar and a crew of one. It was built before the American Revolutionary War (1775—1783) but was adapted for use against the British during this war. Although its pilot twice failed to fasten explosive devices to British ships before losing control of his vessel, he escaped harm.

In 1800, an American inventor, Robert Fulton, designed an underwater machine that he called the Nautilus. This version brought in features that can still be found in some modern submarines, notably adjustable diving planes for better underwater manoeuvring, dual systems of propulsion, and a compressed air system that allowed it to stay down for about four hours without surfacing.

Development of submersible vessels lagged a long way behind the continued progress in the design of surface ships until the American Civil War (1861-1865) when both sides tried out various designs. One of those, called the Hunley — named after its financier rather than its inventor, sank twice during training missions with 11 crew members losing their lives including Hunley himself. Notwithstanding these failures, it was commissioned again in 1864 to attack a ship in Charleston Harbor. A torpedo was used to strike and scuttle the ship – a first in naval history, but the submarine never reappeared, and once again the whole crew perished. Its potential had been recognised, but there still remained the challenge of operating safely under the water.

The US Navy could appreciate the strategic benefits of having submarines in its fleet and held a competition to encourage design and construction of these underwater craft. The inventor, John Holland, won the competition and it was his sixth prototype, the Holland, that the navy bought and added to its fleet in 1900. This submarine was quite different from previous designs. It was propelled by a gasoline engine that turned a propeller while the vessel was on the surface. When it submerged, the engine ran a generator to charge batteries to operate an electric motor. The improved propulsion methods were, unfortunately, highly dangerous. Not only is gasoline flammable and unstable, using it in the restricted environment of a submarine posed quite a hazard for the crewmen. There was another problem, too: the batteries were not only heavy, cumbersome and inefficient, but they were also extremely volatile.

Questions 1-6

Answer the questions below.

Choose NO MORE THAN THREE WORDS from the text for each answer.

Write your answers in boxes 1-6 on your answer sheet.

1. What kind of underwater device was used to investigate the ocean before submersible boats were invented?.....

2. What was the crewman of the first American-built submarine trying to do before his mission failed?.....

3. What gave the Nautilus the ability to remain submerged for a long time?.....

4. When was a submarine first used successfully to sink an enemy boat?.....

5. What new type of propulsion did the Holland use on top of the water?.....

6. For what reason was Diesel's fuel considered safer than Holland's?.....

During the same period as Holland's efforts were being trialled, a German scientist by the name of Rudolf Diesel created an engine which used a fuel less explosive than gasoline and which would consequently be stored safely. Another advantage was that there was no necessity for an electric spark to ignite the fuel. These safety improvements combined with better fuel economy allowed Diesel engines to power a submarine for longer on the surface; however, batteries were still needed to supply energy for underwater operation.

Although diesel-powered submarines were successful and used by the US Navy for almost 50 years, the search for a single power source carried on. It wasn't long before the concept of nuclear power was realised in Germany and taken up by an American physicist, Ross Gunn, who could envisage its potential in submersibles. A research team was put together to adapt the concept of nuclear power for use in submarines. In effect, modern nuclear submarines have on board a small nuclear power plant which produces a great amount of energy. This is used to heat water and create steam which drives a huge turbine which turns the propeller.

There have been many adaptations and technological improvements made to submarines over the years, but the shape is basically the same. Obviously, it is a totally enclosed craft, cigar shaped with narrowed ends. The outer hull is the largest part of the boat and forms the body. The inner hull is designed to resist the considerable water pressure and insulates the crew from the cold. This is where the crew works, eats and sleeps. It also contains the engine room and the apparatus that makes clean air and clean water. Between the hulls are the ballast tanks for controlling buoyancy. There is a tall fin-shaped sail that comes up out of the hull. Inside the sail is the conning tower and extending from this, to the fore, there is a periscope (through which the captain can see the sea and sky when the submarine is near the surface of the water). Sonar is used for navigation deep below the surface. The other projection from the conning tower is the radio antenna.

Underwater, there are two controls for steering the submarine. The rudder (like a tail fin) controls side-to-side movement, and diving planes influence rise and descent. There are two sets of diving planes: the forward sailplanes and the stem planes, which are located at the back with the rudder and propeller.

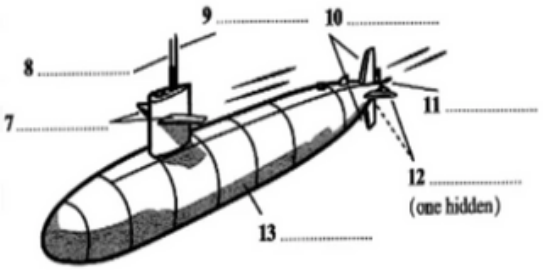
Advancing technology will undoubtedly result in different shapes and modes of operation, and it is quite possible that, in the future, submarines will be manned by robots or computer technology that communicates information to land bases via satellite.

Questions 7-13

Label the diagram below.

Choose NO MORE THAN TWO WORDS from the text for each answer.

Write your answers in boxes 7-13 on your answer sheet.



Đề thi thật 2 The dingo debate

Graziers see them as pests, and poisoning is common, but some biologists think Australia's dingoes are the best weapon in a war against imported cats and foxes.

A A plane flies a slow pattern over Carlton Hill station, a 3,600 square kilometre ranch in the Kimberley region in northwest Australia. As the plane circles, those aboard drop 1,000 small pieces of meat, one by one, onto the scrubland below, each piece laced with poison; this practice is known as baiting.

Besides 50,000 head of cattle, Carlton Hill is home to the dingo, Australia's largest mammalian predator and the bane of a grazier's (cattle farmer's) life. Stuart McKechnie, manager of Carlton Hill, complains that graziers' livelihoods are threatened when dingoes prey on cattle. But one man wants the baiting to end, and for dingoes to once again roam Australia's wide-open spaces. According to Chris Johnson of James Cook University, 'Australia needs more dingoes to protect our biodiversity.'

B About 4,000 years ago, Asian sailors introduced dingoes to Australia. Throughout the ensuing millennia, these descendants of the wolf spread across the continent and, as the Tasmanian tiger disappeared completely from Australia, dingoes became Australia's top predators. As agricultural development took place, the European settlers found that they could not safely keep their livestock where dingoes roamed. So began one of the most sustained efforts at pest control in Australia's history. Over the last 150 years, dingoes have been shot and poisoned, and fences have been used in an attempt to keep them away from livestock. But at the same time, as the European settlers tried to eliminate one native pest from Australia, they introduced more of their own.

C In 1860, the rabbit was unleashed on Australia by a wealthy landowner and by 1980 rabbits had covered most of the mainland. Rabbits provide huge prey base for two other introduced species: the feral (wild) cat and the red fox.

The Interaction between foxes, cats and rabbits is a huge problem for native mammals. In good years, rabbit numbers increase dramatically, and fox and cat populations grow quickly in response to the abundance of this prey. When bad seasons follow, rabbit numbers are significantly reduced - and the dwindling but still large fox and cat populations are left with little to eat besides native mammals.

Questions 1-7

Reading Passage has eight sections, A-H.

Which sections contains the following information?

Write the correct letter, A-H, in boxes 1-7 on your answer sheet.

NB You may use any letter more than once.

1 a description of a barrier designed to stop dingoes, which also divides two kinds of non-natives animals

2 how dingoes ensure that rival species do not dominate

3 a reference to a widespread non-native species that other animals feed on

4 a mention of the dingo's arrival in Australia

5 research which has proved that dingoes have resorted to eating young livestock

6 a description of a method used to kill dingoes

7 the way that the structure of dingo groups affects how quickly their numbers grow

Questions 8-10

Look at the following statements (Questions 8-10) and the list of people below.

Match each statement with the correct person, A, B, c or D.

Write the correct letter, A, B, C or D, in boxes 8-10 on your answer sheet.

8 Dingoes tend to hunt native animals rather than hunting other non-native predators.

9 The presence of dingoes puts the income of some people at risk.

10 Dingoes have had little impact on the dying out of animal species in Australia.

List of People

A Stuart McKechnie

B Chris Johnson

C Lee Allen

D Mark Clifford

D Australian mammals generally reproduce much more slowly than rabbits, cats and foxes - and adaption to prevent overpopulation in the arid environment, where food can be scarce and unreliable - and populations decline because they can't grow fast enough to replace animals killed by the predators. Johnson says dingoes are the solution to this problem because they keep cat and fox populations under control. Besides regularly eating the smaller predators, dingoes will kill them simply to lessen competition.

Dingo packs live in large, stable territories and generally have only one fertile, which limits their rate of increase. In the 4,000 years that dingoes have been Australia, they have contributed to few, if any, extinctions, Johnsons says.

E Reaching out from a desolate spot where three states meet, for 2,500 km in either direction, is the world's longest fence, two metres high and stretching from the coast in Queensland to the Great Australian Bight in South Australia; it is there to keep dingoes out of southeast, the fence separates the main types of livestock found in Australia. To the northwest of the fence, cattle predominate; to the southwest, sheep fill the landscape. In fact, Australia is a land dominated by these animals - 25 million cattle, 100 million sheep and just over 20 million people

F While there is no argument that dingoes will prey on sheep if given the chance, they don't hunt cattle once the calves are much past two or three weeks old, according to McKechnie. And a study in Queensland suggests that dingoes don't even prey heavily on the newborn calves unless their staple prey disappears due to deteriorating conditions like drought.

This study, co-authored by Lee Alien of the Robert Wicks Research Centre in Queensland, suggests that the aggressive baiting programs used against dingoes may actually be counter-productive for graziers. When dingoes are removed from an area by baiting m the area is recolonized by younger, more solitary dingoes. These animals aren't capable of going after the large prey like kangaroos, so they turn to calves. In their study, some of the highest rates of calf predation occurred in areas that had been baited.

G Mark Clifford, general manager of a firm that manages over 200,000 head of cattle, is not convinced by Allen's assertion. Clifford says, 'It's obvious if we drop or loosen control on dingoes, we are going to lose more calves.' He doesn't believe that dingoes will go after kangaroos when calves are around. Nor is he persuaded of dingoes' supposed ecological benefits, saying he is not convinced that they manage to catch cats that often, believing they are more likely to catch small native animals instead.

H McKechnie agrees that dingoes kill the wallabies (small native animals) that compete with his cattle for food, but points out that in parts of Westers Australia, there are no fixes, and not very many cats. He doesn't see how relaxing controls on dingoes in his area will improve the ecological balance.

Johnson sees a need for a change in philosophy on the part of graziers. 'There might be a number of different ways of thinking through dingo management in cattle country,' he says. 'At the moment, though, that hasn't got through to graziers. There's still just on prescription, and that is to bait as widely as possible.'

Questions 11-13

Complete the sentences below.

Choose NO MORE THAN TWO WORDS from the passage for each answer.

Write your answers in boxes 11-13 on your answer sheet.

11. The dingo replaced the 11 _____ as the main predatory animal in Australia.

12. Foxes and cats are more likely to hunt native animals when there are fewer 12 _____

13. Australian animals reproduce at a slow rate as a natural way of avoiding 13_____

Đề thi thật 3: Charles Darwin

Charles Darwin, the brilliant anthropologist and creator of the theory of evolution, is not normally associated with the modern business world. Nevertheless, Darwinian evolutionary theory is the foundation of a new wave of ideas about human behavior in general and particularly the way people behave in the workplace; these ideas have given the title of evolutionary psychology. Evolutionary psychology revolves around the notion that our brains, like our bodies, have an inherited evolutionary design that has scarcely changed for 10,000 years. As respected evolutionary psychology experts Leda Cosmides and John Tooby comment, "our modern skulls house a Stone Age mind." The US biologist Edward O. Wilson sees evolutionary psychology as being a discipline which is based on both socio-biology, which is the study of the biological basis of social behavior, and psychology, which is the systematic study of human behavior.

Nigel Nicholson, an organisational psychologist from the London Business School, is a strong supporter of evolutionary psychology and on this subject has published Managing the Human Animal. His book takes the reader on a journey from the Stone Age plains of the savannah to the modern office, and includes a discussion of Darwinism and behavioural psychology together with a dissection of dysfunctional organisational behavior. It is an effective approach explaining why people behave as they do, particularly at work. Evolutionary psychology is increasingly being cited in management circles, where managers are trying to understand puzzling aspects of human behaviour and by doing so improve the workplace. Nicholson believes that evolutionary psychology can help managers understand what goes wrong in organisational life and what they can do about it.

Nicholson maintains that evolutionary psychology dismisses the long-held assumption that our minds are like blank pages just waiting for culture and experience to write on them and shape our nature. He points out that sophisticated research shows the brain actually houses a store of knowledge when we are born, and now genetic research is establishing there are certain genes that account for abilities, tastes, and tendencies. The stored knowledge in the human brain has not changed much since the Stone Age. As Tooby and Cosmides stress, there have not been enough generations for a brain that is well adapted to our post-industrial life to evolve through natural selection.

The evolutionary psychology version of human nature revolves around some key elements which we have inherited from our hunter-gatherer minds. One key element is emotion. Emotion was originally essential to keep early man alive and safe from predators. Emotion was, and continues to be, our radar, guiding us throughout today's techno-defined business world. Despite this, the business world emphasises rational, not emotional, behaviour and does not admit the importance of emotion. We still use the emotional part of our minds to make sense of other people's behaviour and to create an impression, so we can often be taken in by appearances. This mental predisposition actually works best in small communities—the tribe—not in much larger environments filled with people we barely know, the modern workplace. Our minds naturally try to re-create our ancestral communities with networks of no more than 150 people, where there are clear hierarchies and leaders. As a consequence, it takes very little to trigger people's innate distrust of others because our safety in antiquity depended on supporting our near family and friends, whom we valued more than other people.

Questions 27-31

Choose the correct letter A, B, C, or D.

Write the correct letter in boxes 27-31 on your answer sheet.

27

The writer's purpose in the first paragraph is to

A) oppose the views of Charles Darwin

B) compare experts' opinions of Darwin's theory.

C) explain the theory of evolutionary psychology.

D) name experts in the field of evolutionary psychology.

28

In the third paragraph, which view about evolutionary psychology matches Nicholson's opinion?

A) Our characters determine our career choices.

B) We begin life without any preconceived notions.

C) Our interests and skills depend on our environment.

D) We inherit ideas and characteristics from our ancestors.

29

The writer discusses the key element of emotion in order to

A) criticise primitive survival strategies.

B) explain attitudes and actions at work.

C) demonstrate the slowness of evolution.

D) suggest companies today are poorly structured.

30

Which of the following does Nicholson predict will happen in the business world?

A) Companies will remain in city centres.

B) Promotion will no longer motivate people.

C) Employees will be less independent than now.

D) Social interaction will remain important to workers.

31

Which of the following is the most suitable title for Reading Passage 3?

A) How successful companies manage change.

B) Understanding the origins of workplace behavior.

C) Darwin's theories rejected by modern management.

Questions 32-35

Do the following statements agree with the views of the writer in Reading Passage 3?

Write:

YES if the statement agrees with the views of the writer.

NO if the statement contradicts the views of the writer.

NOT GIVEN if it is impossible to say what the writer thinks about this.

32 Nicholson makes a persuasive argument in his book.

33 Tooby and Cosmides believe natural selection through the generations has not occurred.

34 Our reliance on technology causes emotional problems in the workplace.

35. Nicholson's views are more accepted by older executives.

Đề thi thật 3: Charles Darwin

So, what advice does Nicholson have for the corporate world? He thinks that by knowing the reasons for people's behaviour, it is possible to mould corporate environments into places that have more chance of working efficiently and being pleasant places to work in. Nicholson admits that not everybody in the business world agrees with his belief in the effectiveness of evolutionary psychology in the workplace. One group that resists the theory of evolutionary psychology is young MBA graduates who are just beginning their careers and feel that evolutionary psychology will make their lives at work more difficult. Older and wiser executives point out that they still tend to cling to the idea of a magic formula to bring people into line with corporate strategy. But that is back-to-front thinking, according to Nicholson, who contends that we should be reinventing our business structures, not our fundamental human nature.

At the end of his book, Nicholson gives his forecast of what will and will not change in the business world. He believes that most people will still prefer more traditional forms of work and throughout their lives will continue to aim at lifelong status advancement. He also maintains that the line between work and home will be less defined, but that people will prefer traditional working patterns if working from home leaves them isolated from their work community. He doubts that the high-tech ideas of virtual companies will ever be very successful because people will still want to meet each other face to face. Nicholson describes his ideal organisation in the future: it would be decentralized, with small sub-units; the staff would be from diverse backgrounds and be allowed a high degree of self-determination. New endeavours and creativity would replace systems and rationality. Nicholson acknowledges that there is a long way to go in terms of the translation of his ideas of evolutionary psychology into practical propositions, but he is confident more and more people will come round to his way of thinking.

Questions 36-40

Complete the summary using the list of words, A-I, below.

Write the correct letter, A-I, in boxes 36-40 on your answer sheet.

Nicholson's advice to the corporate world

Nicholson believes that if we know why people act the way they do, we can 36._____employees will work more efficiently. Nicholson 37._____but some executives are more open to what evolutionary psychology says. However, these executives still believe that there is a 38._____that will make employees act according to the company's practices. According to Nicholson, we should change our 39._____business environments, not our fundamental 40._____ .

Answer choices:

A. acknowledge
B. rejects
C. evolution
D. strategy
E. formula
F. structure
G. corporate
H. understand
I. nature