

Vol 1 Test 2

Passage 1: The clipper races

1. False	<u>During the seventeenth and eighteenth centuries, the British East India Company had the monopoly</u> on trade with China and India. This meant that because <u>no rival</u>
2. True	This meant that because no rival could legally import tea or other goods from these countries at this time, <u>the company</u> was rarely in a hurry to transport its merchandise. Instead, <u>its priority</u> was to minimise costs by <u>carrying as much as possible on each ship</u> . This meant that its ships - known as East Indiamen - were <u>enormous</u> , strong and very slow.
3. TRUE	By 1800, the average <u>East Indiaman</u> could carry 1.200 tons of merchandise. The trading pattern for China tea usually meant the East Indiamen set sail from Britain in January, sailed round the Cape of Good Hope at the southernmost tip of Africa, and arrived in China in September. There they would load up that year's tea harvest, set off again and, depending on the wind and weather, aim to arrive back by the following September. So even <u>with favourable sailing conditions</u> , the round trip <u>lasted almost two years</u> , and if anything went wrong it could take a lot longer.
4. Not given	The trading pattern for China tea usually meant the East Indiamen set sail from Britain in January, sailed round the Cape of Good Hope at the southernmost tip of Africa, and <u>arrived in China</u> in September. There they would load up that year's tea harvest, set off again and, depending on the wind and weather, aim <u>to arrive back</u> by the following September. So even with favourable sailing conditions, the round trip lasted almost two years, and <u>if anything went wrong</u> it could take a lot longer.
5. False	However, <u>by 1834</u> the company had lost its trading monopolies, and tea had become a freely traded item. Having no more use for its great ships, the company sold them off, and many were bought by merchants or their captains, who <u>continued to plough the seas between Britain and China</u> .
6. False	This was partly because if you were home first, you could

	<p>sell your shipment of tea before your competitors even arrived, and partly because <u>consumers in Britain in the nineteenth century</u> believed that <u>the fresher and earlier-picked the tea, the better the resulting drink.</u></p> <p>Tea traders now needed faster,</p>
7. sails	<p>In fact it was the Americans who pioneered the first clipper ships. These vessels were fast and slender, with a narrow hull that was deeper at the back than at the front and masses of <u>sails</u> on tall masts.</p>
8. storms	<p>These vessels were fast and slender, with a narrow hull that was deeper at the back than at the front and masses of <u>sails</u> on tall masts. They earned their name from the way that they clipped off journey times British merchants resolved to build their own clippers to rival the Americans and the first British tea clipper, Stormaway, was built in Aberdeen in 1850. More tea clippers were designed and built in Britain throughout the 1850s and 1860s, they had a narrower beam than their American equivalents, making them less powerful during <u>storms</u>, but</p>
9. Challenger	<p>There was a great spirit of competition between the British and American ships plying the tea trade, but to begin with the Americans had the edge. Then in 1851 a British ship owner, Richard Green, built the aptly named clipper <u>Challenger</u>, with the stated intention of beating the American ships. Loaded with tea. Challenger left China for London in 1852 at the same time as the American clipper Challenge, a much larger, older ship, already greatly admired for its speed. Large sums were bet on which would complete the journey first. In the event, the British ship beat its rival to London by two days, amid much jubilation. From then on, such international races grew in popularity.</p>
10.ports	<p>After 1855, American participation in the British tea trade gradually stopped. But even without the Anglo-American rivalry, the competitive spirit continued. It was really ignited when new <u>ports</u> were opened up for trade in China...</p>
11.paperwork	<p>These included Fouchow, which was much closer to the tea-producing areas than Canton, the port used previously. As a result, tea could be loaded onboard earlier and fresher, and the clippers could set off in late May or early June - sometimes not even taking time to fill out the</p>

	official paperwork - racing back to Britain whatever the difficulties.
12.tugs	They sped down through the South China Sea and into the Indian Ocean, then raced to get round the southernmost tip of Africa at the Cape of Good Hope. Then it was north across the vast Atlantic, past the Azores, through the English Channel and into the estuary of the River Thames. Once there, they would be towed by tugs , up the river and into the docks.
13.money	But the races were about more than just money the crews , about 40 men on each clipper, were expert sailors, proud of their ships, and they delighted in competing against each other . Without their enthusiasm, the races would never have happened, since getting the ship home as fast as possible required the crew to be totally dedicated and to sacrifice much of their rest for the duration of the race.

Passage 2: Orientation of birds

14.visual memory	In the first type, birds methodically explore the area in which they are released until they pick up some familiar feature, and then they quickly find their way back to the nest. Such birds possess a highly developed visual memory , as experiments with pigeons have shown. Domestic pigeons have been trained to peck at a certain point on an aerial photograph, with a system of rewards, and four years later the birds were still able to respond to this training when placed on the aerial photograph. Birds' eyes have a power of resolution two to three times greater than ours, enabling them to pick up very fine details. If a bird uses only this type of homing behaviour, however, it can only succeed if the point of release is not too far away...
15.migration direction 16.destination	The second type of homing behaviour is shown by birds that are capable of choosing their flight direction and holding to it for the rest of their journey. How do they decide what direction to take? They appear to choose their normal migration direction even if they are released in a different place from their usual stalling point. If, for example, birds which normally fly to the

	north-east to reach latitude 45 degrees north are released at that latitude, they will immediately start flying north-east anyway. So if they're released further to the west, they'll maintain the correct direction, but fly west of their destination , and so fail to arrive .
17.landmarks 18.(laysan) albatross	This happens even if the birds are in a country right off their migration routes, where they have never been before. In one example , a laysan albatross returned to its nesting area on Midway Island in the middle of the Pacific, having flown over 5000 kilometres from the west coastal of the USA in just over ten days. This is a perfect example of the third type of homing, for the albatross clearly couldn't rely on any landmarks over the vast expanse of the Pacific Ocean.
19.C	If a bird uses only this type of homing behaviour, however, it can only succeed if the point of release is not too far away . If the birds are transported 800 kilometres from their nest, it is only by good fortune that they find their way back as a result
20.B	The first systematic studies on orientation in birds were made possible by the 'homing instinct' exhibited by so many species. Birds are caught at a time when they show an attachment to their territory, especially during the nesting season. They are taken to some spot, released, and the percentage of returns is recorded . The distance can be varied, and the direction, as well as the method of transporting them, and then the influence of climatic and other factors on their ability to find their way home can be studied. These experiments have
21.C	In the first type, birds methodically explore the area in which they are released until they pick up some familiar feature, and then they quickly find their way back to the nest. Such birds possess a highly developed visual memory, as experiments with pigeons have shown. Domestic pigeons have been trained to peck at a certain point on an aerial photograph, with a system of rewards, and four years later the birds were still able to respond to this training when placed on the aerial photograph. Birds' eyes have a power of resolution two to three times greater than ours , enabling them to pick up very fine details...
22.G	What part does heredity play in all this? Two research

	<p>studies suggest that instinctive, i.e. genetically inherited, behaviour patterns play a part in navigation. The first was carried out by Ernst Schuz and it is highly significant. Schuz caught first year European storks and released them later, after the departure of the adult storks at a time when they normally make their south-west autumn migration to Africa. The</p>
23.C	<p>In the first type, birds methodically explore the area in which they are released until they pick up some familiar feature, and then they quickly find their way back to the nest. Such birds possess a highly developed visual memory, as experiments with pigeons have shown. Domestic pigeons have been trained to peck at a certain point on an aerial photograph, with a system of rewards, and four years later the birds were still able to respond to this training when placed on the aerial photograph.</p>
24.F	<p>The percentage of successful birds varies greatly, being highest in those species with a strong migratory behaviour. Thus the lesser black-backed gull is more migratory than the herring gull and more often reaches home'. Great migrants such as the swift have the highest percentage of returns. In one case, seven out of nine alpine swifts were recaptured at their nests after being displaced some 1400 kilometres; one made the journey in three days.</p>
25.A	<p>What part does heredity play in all this? Two research studies suggest that instinctive, i.e. genetically inherited, behaviour patterns play a part in navigation. The first was carried out by Ernst Schuz and it is highly significant. Schuz caught first year European storks and released them later, after the departure of the adult storks at a time when they normally make their south-west autumn migration to Africa. The recaptures showed that, in spite of the fact that there were no adults to guide them, the birds unanimously headed south-west. This was a most striking finding, for it showed that the birds had an innate and unlearned attraction for the African wintering area that they have occupied for thousands of years.</p>
26.D	<p>The case of starlings is a little different. These birds have a great aptitude for homing, but this behaviour differs in the different age groups. Birds that were shifted to the</p>

	<p>south-east of their normal migration route split into two lots. The adults, in full possession of their gift for orientation, found their wintering area by modifying their direction by 90 degrees, whereas the juveniles sought their winter quarters to the south-east of their real position.</p>
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Passage 3: The role of accidents in business

27. Yes	<p>In 1894 Dr. John Kellogg and his brother, Will, were supervising a hospital and health spa in Michigan. The patients were on a restricted diet. One day, the brothers left cooked wheat untended for more than 24 hours. When they returned, they saw what they had done. It was no good to eat, but they decided to run the stale wheat through rollers, just to see how it would turn out. Normally, the process produced long sheets, but they were surprised to discover that this time the rollers created flat flakes. They</p>
28. No	<p>Accidents happen; there is nothing predictable and orderly about innovation. Nobel laureate Sir Alan Hodgkin, who discovered how nerve cells transmit electrical impulses between the skin and the brain, commented: 'I believe that the record of my published papers conveys an impression of directedness and planning which does not at all coincide with the actual sequence of events.'</p>
29. No	<p>The same rule applies in business. The mistake that gave us cornflakes keeps repeating itself in the history of disruptive innovation, the kind that transforms markets. Louis Daguerre, for instance, discovered the technique that gave us photography in the 1830s, when drops of mercury from a shattered thermometer produced a photographic image...</p>
30. Yes	<p>The artificial sweetener, saccharin, was the unintentional result of a medical scientist's work on a chemical treatment for gastric ulcers. While working for the firm 3M, researcher Art Fry had no idea he was taking the first steps towards Post It Notes when he used bits of adhesive office paper that could be easily lifted off the page to replace the scrap paper bookmarks that kept falling out of</p>

	his hymn book.
31.Not given	While working for the firm 3M , researcher Art Fry had no idea he was taking the first steps towards Post It Notes when he used bits of adhesive office paper that could be easily lifted off the page to replace the scrap paper bookmarks that kept falling out of his hymn book.
32.F	Breakthrough and disruptive innovation are rarely driven by orderly process. Usually they come out of a chaotic, haphazard mess, which is why big companies, full of managers schooled in business programmes designed to eliminate random variation and mistakes, struggle with them. In these sorts of environments, accidents are called failures and are discouraged.
33.G	It is no surprise then that research from the late British economist Paul Geroski and London Business School's Constantinos Markides found that companies that were skilled at innovation were usually not that skilled when it came to commercialisation , and vice versa. Their book, <i>Fast Second</i> , divides businesses into 'colonists' and 'consolidators'. Small and nimble
34.C	It is no surprise then that research from the late British economist Paul Geroski and London Business School's Constantinos Markides found that companies that were skilled at innovation were usually not that skilled when it came to commercialisation, and vice versa. Their book, <i>Fast Second</i> , divides businesses into 'colonists' and 'consolidators'. Small and nimble, colonists are adept at creating market niches but are terrible institution builders. Consolidators, with their strong cultures of discipline and cost control, know how to take clever ideas from other firms and turn them into mass-market items. Microsoft is a prime instance of this.
35.A	Accident-prone innovation, they say, requires companies to get outside the 'cone of expectation'. It means throwing together groups from diverse backgrounds, and combining ideas in unpredictable ways . Other strategies also include having systems that watch out for accidents and examine them for value, generating them when they do not happen often enough, seizing on the useful ones , capturing their valuable features, and building on them to add value and give potential for useful accidents .

36.B	Accident-prone innovation, they say, requires companies to get outside the 'cone of expectation' . It means throwing together groups from diverse backgrounds , ...
37.D	All this, however, requires thinking that is often counter-intuitive to the way businesses operate. In other words, it is the kind of thinking that goes against the beliefs of most business managers. It runs counter to the notion frequently pushed by consultants that you can 'harness' creativity and direct it to line up with intention. The cost of accidents business, people tend to call such efforts failure.'
38.A	for example, made a bad error when it launched a new beer called Empire Lager , pitched at younger consumers. Having spent a fortune creating a beer with a sweeter taste, designing a great-looking bottle and a television campaign, Foster's was left with a drink that no one wanted to buy . The target market was more interested in brands built up by word of mouth. Instead of wiping the unsuccessful product launch, Fosters used this lesson learned to go on and develop other brands instead. One of them, Pure Blonde, is now ranked as Australia's fifth-largest beer brand . Unlike Empire Lager, there has been almost no promotion and its sales are generated more by word of mouth.
39.C	Instead of wiping the unsuccessful product launch, Fosters used this lesson learned to go on and develop other brands instead. One of them, Pure Blonde , is now ranked as Australia's fifth-largest beer brand. Unlike Empire Lager , there has been almost no promotion and its sales are generated more by word of mouth.
40.B	Other companies are taking similar steps to study their own slip-ups . Intuit, the company behind financial tools such as Quicken, holds regular When Learning Hurts sessions. But this sort of transformation is never easy . In a market that focuses on the short-term, convincing employees and shareholders to tolerate failure and not play it safe is a big thing to ask .