Reading passage 1

Critical Thinking

Society has long cherished the ability to think beyond the ordinary, and in a world where knowledge is revered and innovation equals progress, those able to bring forth greater insight and understanding are destined to make their mark.

'Critical thinking as an attitude is embedded in Western culture. There is a belief that argument is the way to finding truth,' observes Adrian West, research director at the Edward de Bono Foundation U.K., and a former computer science lecturer at the University of Manchester.

Although there's little debate that information technology complements – and often enhances – the human mind in the quest to retain information and process an ever-growing tangle of bits and bytes, there's increasing concern that the same technology is changing the way we approach complex problems and conundrums, and making it more difficult to really *think*. 'We're exposed to greater amounts of poor yet charismatic thinking, the fads of intellectual fashion, opinion, and mere assertion,' says West. 'The wealth of communications and information can easily overwhelm our reasoning abilities.' What's more, it's ironic that ever-growing piles of data and information do not equate to greater knowledge and better decision-making. What's remarkable, West says, is just 'how little this has affected the quality of our thinking.'

According to the National Endowment for the Arts, literary reading has declined 10 percentage points, and the rate of decline is accelerating. Many, including Patricia Greenfield, a UCLA distinguished professor of psychology and director of the Children's Digital Media Center, Los Angeles, believe that a greater focus on visual media exacts a toll. 'A drop-off in reading has possibly contributed to a decline in critical thinking,' she says. 'There is a greater emphasis on real-time media and multitasking rather than focusing on a single thing.' Nevertheless, the verdict isn't in and a definitive answer about how technology affects critical thinking is not yet available. Instead, critical thinking lands in a mushy swamp somewhere between perception and reality; measurable and incomprehensible.

Arriving at a clear definition for critical thinking is tricky. One source describes it as 'purposeful and reflective judgment about what to believe or what to do in response to observations, experience, verbal or written expressions, or arguments.' Overlay technology and that's where things get complex. 'We can do the same critical-reasoning operations without technology as we can with it – just at different speeds,' West says.

Moreover, while it's tempting to view computers, video games, and the internet in a largely good or bad way, the reality is that they may be both, and different technologies, systems, and uses yield entirely different results. For example, a computer game may promote critical thinking or detract from it. Reading on the internet may ratchet up one's ability to analyze while chasing an endless array of hyperlinks may undercut deeper thought.

Exposure to technology fundamentally changes the way people think, says Greenfield, who recently analyzed more than 50 studies on learning and technology, including research on multitasking and the use of computers, the internet, and video games. As visual media have exploded, noticeable changes have resulted, she notes. 'Reading enhances thinking and engages the imagination in a way that visual media such as video games and television do not,' Greenfield explains. 'It develops imagination, induction, reflection, and critical thinking, as well as vocabulary.' However, she has found that visual media actually improve some types of information processing. Unfortunately, 'most visual media are real-time media that do not allow time for reflection, analysis, or imagination,' she says. The upshot? Many people – particularly those who are younger – wind up not realizing their intellectual potential.

How society views technology has a great deal to do with how it forms perceptions about critical thinking. And nowhere is the conflict more apparent than at the intersection of video games and cognition. James Paul Gee, a professor of educational psychology and author of *What Video Games Have to Teach Us About Learning and Literacy*, points out that things aren't always as they appear. 'There is a strong undercurrent of opinion that video games aren't healthy for kids,' he says. 'The reality is that they are not only a major form of entertainment, they often provide a very good tool for learning.' In fact, an expanding body of evidence indicates that joysticks can go a long way toward helping children gain better reasoning skills. Games such as *Sim City* and *Civilization* extend beyond rote memorization, and teach decision-making and analytical skills in immersive, virtual environments that resemble the real world, Gee says. Moreover, these games – and some virtual worlds – give participants freedom to explore ideas and concepts that might otherwise be inaccessible or off limits.

It's certain that in the digital age, critical thinking is a topic that's garnering greater attention. As reading and math scores decline on standardized tests, many observers argue that it's time to take a closer look at technology and understand the subtleties of how it affects thinking and analysis.

Questions 1–5

Do the following statements agree with the information given in the reading passage?

Next to questions 1–5 write

TRUE *if the statement agrees with the information*

FALSE *if the statement contradicts the information*

NOT GIVEN *if there is no information on this*

1 People are less interested in literary reading nowadays than they were in the past. _____

2 Experts have been able to define exactly what impact technology has had on people's critical thinking skills. _____

3 It is easy to clarify what exactly is involved in critical thinking. _____

4 Dealing with hyperlinks in online texts diminishes the reader's ability to think seriously about the text. _____

5 There is increasing evidence to suggest that playing video games enhances children's motor skills among other abilities. _____

Questions 6–10

Complete the sentences below.

*Use **ONE WORD ONLY** from the passage for each answer.*

6 Adrian West maintains that despite being exposed to much more information, people do not have a greater amount of _____ .

7 According to Patricia Greenfield, there is an emphasis nowadays on _____ rather than concentrating on individual jobs.

8 West feels that using technology affects the _____ at which people are able to think critically.

9 Greenfield believes that real-time visual media differ from reading in that they don't allow people to use their _____ .

10 James Paul Gee thinks that as well as being useful for _____ purposes, computer games are also valuable as an educational tool.

YOUR ANSWERS:

Questions 1-5: Write in capital letters: T/ F/ NG for each question

1. _____

2. _____

3. _____

4. _____

5. _____

Questions 6-10: Do not write in capital letters.

6. _____

7. _____

8. _____

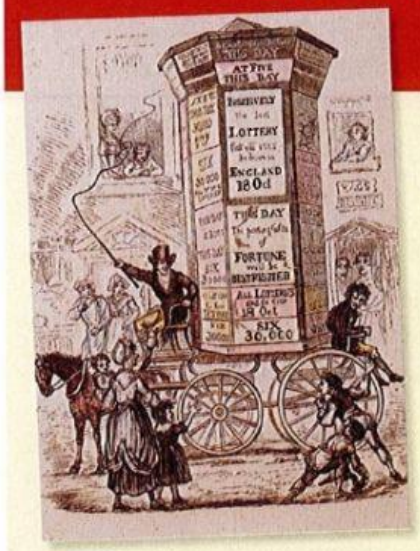
9. _____

10. _____

Reading Passage 2

The history of the poster

The appearance of the poster has changed continuously over the past two centuries.



The first posters were known as 'broadsides' and were used for public and commercial announcements. Printed on one side only using metal type, they were quickly and crudely produced in large quantities. As they were meant to be read at a distance, they required large lettering.

There were a number of negative aspects of large metal type. It was expensive, required a large amount of storage space and was extremely heavy. If a printer did have a collection of large metal type, it was likely that there were not enough letters. So printers did their best by mixing and matching styles.

Commercial pressure for large type was answered with the invention of a system for wood type production. In 1827, Darius Wells invented a special wood drill – the lateral router – capable of cutting letters on wood blocks. The router was used in combination with William Leavenworth's pantograph (1834) to create decorative wooden letters of all shapes and sizes. The first posters began to appear, but they had little colour and design; often wooden type was mixed with metal type in a conglomeration of styles.

A major development in poster design was the application of lithography, invented by Alois Senefelder in 1796, which allowed artists to hand-draw letters, opening the field of type design to endless styles. The method involved drawing with a greasy crayon onto finely surfaced Bavarian limestone and offsetting that image onto paper. This direct process captured the artist's true intention; however, the final printed image was in reverse. The images and lettering needed to be drawn backwards, often reflected in a mirror or traced on transfer paper.

As a result of this technical difficulty, the invention of the lithographic process had little impact on posters until the 1860s, when Jules Cheret came up with his 'three-stone lithographic process'. This gave artists the opportunity to experiment with a wide spectrum of colours. Although the process was difficult, the result was remarkable, with nuances of colour impossible in other media even to this day. The ability to mix words and images in such an attractive and economical format finally made the lithographic poster a powerful innovation.

Starting in the 1870s, posters became the main vehicle for advertising prior to the magazine era and the dominant means of mass communication in the rapidly growing cities of Europe and America. Yet in the streets of Paris, Milan and Berlin, these artistic prints were so popular that they were stolen off walls almost as soon as they were hung. Cheret, later known as 'the father of the modern poster', organised the first exhibition of posters in 1884 and two years later published the first book on poster art. He quickly took advantage of the public interest by arranging for artists to create posters, at a reduced size, that were suitable for in-home display.

Thanks to Cheret, the poster slowly took hold in other countries in the 1890s and came to celebrate each society's unique cultural institutions: the café in France, the opera and fashion in Italy, festivals in Spain, literature in Holland and trade fairs in Germany. The first poster shows were held in Great

Britain and Italy in 1894, Germany in 1896 and Russia in 1897. The most important poster show ever, to many observers, was held in Reims, France, in 1896 and featured an unbelievable 1,690 posters arranged by country.

In the early 20th century, the poster continued to play a large communication role and to go through a range of styles. By the 1950s, however, it had begun to share the spotlight with other media, mainly radio and print. By this time, most posters were printed using the mass production technique of photo offset, which resulted in the familiar dot pattern seen in newspapers and magazines. In addition, the use of photography in posters, begun in Russia in the twenties, started to become as common as illustration.

In the late fifties, a new graphic style that had strong reliance on typographic elements in black and white appeared. The new style came to be known as the International Typographic Style. It made use of a mathematical grid, strict graphic rules and black-and-white photography to provide a clear and logical structure. It became the predominant style in the world in the 1970s and continues to exert its influence today.

It was perfectly suited to the increasingly international post-war marketplace, where there was a strong demand for clarity. This meant that the accessibility of words and symbols had to be taken into account. Corporations wanted international identification, and events such as the Olympics called for universal solutions, which the Typographic Style could provide.

However, the International Typographic Style began to lose its energy in the late 1970s. Many criticised it for being cold, formal and dogmatic. A young teacher in Basel, Wolfgang Weingart, experimented with the offset printing process to produce posters that appeared complex and chaotic, playful and spontaneous – all in stark contrast to what had gone before. Weingart's liberation of typography was an important foundation for several new styles. These ranged from Memphis and Retro to the advances now being made in computer graphics.

adapted from www.internationalposter.com

Look at Questions 1–5 below.

1 Decide what type of information you need to complete each gap.
2 What parts of the table help you quickly find the paragraphs that will give you the answers?
3 Read those paragraphs carefully and answer Questions 1–5.

Questions 1–5

Complete the table below.

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

Early Printing Methods

	Features	Problems
Metal type	• produced large print	• cost, weight and **1** ..... difficulties • mixed styles
Wood type	• Darius's wood drill used in connection with another **2** ..... • produced a range of letters	• lacked both **3** ..... • mixed type
Lithography	• letters drawn by hand • design tool – a **4**	• had to use a mirror or **5** ..... to achieve correct image

YOUR ANSWERS:

Questions 1-5:

1. _____

2. _____

3. _____

4. _____

5. _____

Look at the flow chart and Questions 6–9 below.

1 Decide what type of information you need to complete each gap.
2 Find the correct part of the passage, read it carefully and answer Questions 6–9.

Questions 6–9

Complete the flow chart below.

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

Jules Cheret

1860s – invention of 'three-stone lithographic process'

↓

combination of both **6** ..... on coloured posters

↓

1870s – posters used for advertising and **7** ..... in Europe

↓

1884–86 – Cheret's poster **8** ..... and book on poster art

↓

1890s – posters represent **9** ..... around the world

Questions 10–13

Do the following statements agree with the information in the reading passage?

Write

TRUE *if the statement agrees with the information*

FALSE *if the statement contradicts the information*

NOT GIVEN *if there is no information on this*

10 By the 1950s, photographs were more widely seen than artists' illustrations on posters.

11 Features of the Typographic Style can be seen in modern-day posters.

12 The Typographic Style met a global need at a particular time in history.

13 Weingart got many of his ideas from his students in Basel.

YOUR ANSWERS:

Questions 6-9:

6. _____ 8. _____

7. _____ 9. _____

Questions 10-13:

10. _____

11. _____

12. _____

13. _____

Questions 1–7

The reading passage has seven sections, **A–G.**

Choose the correct heading for each section from the list of headings below.

List of Headings	
i	Looking for clues
ii	Blaming the beekeepers
iii	Solutions to a more troublesome issue
iv	Discovering a new bee species
v	An impossible task for any human
vi	The preferred pollinator
vii	Plant features designed to suit the pollinator
viii	Some obvious and less obvious pollen carriers
ix	The undesirable alternative
x	An unexpected setback

YOUR ANSWERS:

1 Section A .....

2 Section B .....

3 Section c .....

4 Section D .....

5 Section E .....

6 Section F .....

7 Section G .....

Gold dusters

by Jennifer S. Holland

They are the Earth's pollinators and they come in more than 200,000 shapes and sizes.

A Row upon row, tomato plants stand in formation inside a greenhouse. To reproduce, most flowering plants depend on a third party to transfer pollen between their male and female parts. Some require extra encouragement to give up that golden dust. The tomato flower, for example, needs a violent shake, a vibration roughly equivalent to 30 times the pull of Earth's gravity, explains Arizona entomologist Stephen Buchmann. Growers have tried numerous ways to rattle pollen from tomato blossoms. They have used shaking tables, air blowers and blasts of sound. But natural means seem to work better.

B It is no surprise that nature's design works best. What's astonishing is the array of workers that do it: more than 200,000 individual animal species, by varying strategies, help the world's 240,000 species of flowering plants make more flowers. Flies and beetles are the original pollinators, going back to when

flowering plants first appeared 130 million years ago. As for bees, scientists have identified some 20,000 distinct species so far. Hummingbirds, butterflies, moths, wasps and ants are also up to the job. Even non-flying mammals do their part: sugar-loving opossums, some rainforest monkeys, and lemurs in Madagascar, all with nimble hands that tear open flower stalks and furry coats to which pollen sticks. Most surprising, some lizards, such as geckos, lap up nectar and pollen and then transport the stuff on their faces and feet as they forage onward.

C All that messy diversity, unfortunately, is not well suited to the monocrops and mega-yields of modern commercial farmers. Before farms got so big, says conservation biologist Claire Kremen of the University of California, Berkeley, 'we didn't have to manage pollinators. They were all around because of the diverse landscapes. Now you need to bring in an army to get pollination done.' The European honeybee was first imported to the US some 400 years ago. Now at least a hundred commercial crops rely almost entirely on managed honeybees, which beekeepers raise and rent out to tend to big farms. And although other species of bees are five to ten times more efficient, on a per-bee basis, at pollinating certain fruits, honeybees have bigger colonies, cover longer distances, and tolerate management and movement better than most insects. They're not picky – they'll spend their time on almost any crop. It's tricky to calculate what their work is truly worth; some economists put it at more than $200 billion globally a year.

D Industrial-scale farming, however, may be wearing down the system. Honeybees have suffered diseases and parasite infestations for as long as they've been managed, but in 2006 came an extreme blow. Around the world, bees began to disappear over the winter in massive numbers. Beekeepers would lift the lid of a hive and be amazed to find only the queen and a few stragglers, the worker bees gone. In the US, a third to half of all hives crashed; some beekeepers reported colony losses near 90 percent. The mysterious culprit was named colony collapse disorder (CCD) and it remains an annual menace – and an enigma.

E When it first hit, many people, from agronomists to the public, assumed that our slathering of chemicals on agricultural fields was to blame for the mystery. Indeed, says Jeff Pettis of the USDA Bee Research Laboratory, 'we do find more disease in bees that have been exposed to pesticides, even at low levels.' But it is likely that CCD involves multiple stressors. Poor nutrition and chemical exposure, for instance, might wear down a bee's immunities before a virus finishes the insect off. It's hard to tease apart factors and outcomes, Pettis says. New studies reveal that fungicides – not previously thought toxic to bees – can interfere with microbes that break down pollen in the insects' guts, affecting nutrient absorption and thus long-term health and longevity. Some findings pointed to viral and fungal pathogens working together. 'I only wish we had a single agent causing all the declines,' Pettis says, 'that would make our work much easier.'

F However, habitat loss and alteration, he says, are even more of a menace to pollinators than pathogens. Claire Kremen encourages farmers to cultivate the flora surrounding farmland to help solve habitat problems. 'You can't move the farm,' she says, 'but you can diversify what grows in its vicinity: along roads, even in tractor yards.' Planting hedgerows and patches of native flowers that bloom at different times and seeding fields with multiple plant species rather than monocrops 'not only is better for native pollinators, but it's just better agriculture,' she says. Pesticide-free wildflower havens, adds Buchmann, would also bolster populations of useful insects. Fortunately, too, 'there are far more generalist plants than specialist plants, so there's a lot of redundancy in pollination,' Buchmann says. 'Even if one pollinator drops out, there are often pretty good surrogates left to do the job.' The key to keeping our gardens growing strong, he says, is letting that diversity thrive.

G Take away that variety, and we'll lose more than honey. 'We wouldn't starve,' says Kremen. 'But what we eat, and even what we wear – pollinators, after all, give us some of our cotton and flax – would be limited to crops whose pollen travels by other means. 'In a sense,' she says, 'our lives would be dictated by the wind.' It's vital that we give pollinators more of what they need and less of what they don't, and ease the burden on managed bees by letting native animals do their part, say scientists.

adapted from National Geographic Magazine

Questions 8–11

Complete the sentences below. Choose ***NO MORE THAN THREE WORDS*** *from the passage for each answer.*

8 Both ..... were the first creatures to pollinate the world's plants.

9 Monkeys transport pollen on their ..... .

10 Honeybees are favoured pollinators among bee species partly because they travel ..... .

11 A feature of CCD is often the loss of all the ..... .

Check your answers to Questions 8–11. Then look at these reasons (a–e) for losing marks in the Reading test. Which of the reasons might apply to Questions 8–11?

REASONS FOR LOSING MARKS

- **a** writing a singular answer when it should be plural
- **b** missing a double letter in a word
- **c** missing out one of two answers
- **d** repeating a paraphrased word from the passage
- **e** leaving out an important word

Questions 12–13

Choose ***TWO*** *letters,* ***A–E.***

Which ***TWO*** *methods of combating the problems caused by CCD and habitat loss are mentioned in the article?*

A using more imported pest controllers

B removing microbes from bees' stomachs

C cultivating a wide range of flowering plants

D increasing the size of many farms

E placing less reliance on honeybees

YOUR ANSWERS:

Questions 8-11:

8. _____

9. _____

10. _____

11. _____

Questions 12-13:

12. _____

13. _____