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**Academic
Reading
Practice Test
23**

Reading Passage 1

You should spend about 20 minutes on Questions 1-12 which are based on Reading Passage 1.

[In 1994 the comet Shoemaker-Levy 9 collided with the planet Jupiter, causing great excitement in the world of astronomy. The article which follows was written after the first impact.]

Shoemaker-Levy 9 has plunged into Jupiter, and the Hubble Space Telescope has moved away to look at other objects in space. Amateur astronomers, however, are still watching Jupiter to see what bruises were left on the mighty planet by the comet crash of 1994. There was tremendous excitement in astronomical circles during the collision of comet and planet. It is now time to see what has been learned from this impact.

One question which may never be answered: Was Shoemaker-Levy 9 really a comet, or was it an asteroid instead? Comets tend to be a mixture of ice, rock and dust, along with other substances, like carbon monoxide, that evaporate quickly to form a halo and a tail. Scientists studying the chemical composition of the spots on Jupiter where Shoemaker Levy 9 (S-L 9) hit thought they might see evidence of water and oxygen, two of the expected products when an icy comet vaporises. But except for one unconfirmed report, researchers have found only ammonia, hydrogen sulphide and sulphur gas.

Asteroids are rockier than comets. Yet it is possible for an asteroid to have a halo or a tail, made mostly of dust. Says Hal Weaver of the Space Telescope Institute: "The only real evidence that SL-9 was a comet is that it broke apart, and we've never seen that in an asteroid. But maybe this was a fragile asteroid'.

Amateur astronomer David Levy, who with Eugene and Carolyn Shoemaker discovered SL-9, points out that comets were originally distinguished by their appearance. They are objects that look like fuzzy stars with tails, and in any previous century astronomers would have called this discovery a comet. On that basis, argues Levy, "S-L 9 is a comet, period'.

The apparent absence of water at the impact sites provides a clue about how far the SL-9 fragments penetrated Jupiter's atmosphere before exploding. Theorists think that a layer of water vapour lies some 95 km below the visible cloud tops; above the vapour layer, about 50 km down, are clouds believed to consist of a sulphur compound. Since no water seems to have been stirred up, the explosion probably took place in the presumed sulphide layer.

If researchers confirm that the sulphur rose up from Jupiter, it will be "a major discovery," says University of Arizona astronomer Roger Yelle. "We've always believed that much of the colour in Jupiter's clouds comes from sulphur compounds, but we've never detected them."

No one knows why the points of impact are so dark, but it is clear that they are very high up in Jupiter's atmosphere, since the planet's stripes can be seen through them. Astronomers believe the collisions will provide an opportunity to study the winds above Jupiter's cloud tops. The mark left by the first impact is already starting to be spread around. There are also hints of seismic waves - ripples that may have travelled all the way to a dense layer of liquid hydrogen thousands of kilometres down and then bounced back up to the surface, creating rings half the size of the planet's visible face. These waves may offer clues to Jupiter's internal structure.

The spots that were made by the collision will undoubtedly blow away eventually, but it's much too soon to tell if there will be any permanent changes in Jupiter. There is still every chance that the impacts, especially from the four fragments that hit in nearly the same place, will destabilise the atmosphere and create a new, permanent cyclone like Jupiter's Great Red Spot.

It's also possible that the show isn't quite over. Theorists using a computer model argue that debris has lagged behind the original 21 major fragments. These stragglers, they predict, will keep hitting Jupiter for months to come. Unlike the previous fragments the latecomers will smash into the near side of the planet, giving astronomers a chance to watch some strikes directly. Is the theory plausible? Says one astronomer, "We've had so many surprises from S-L 9 already that I wouldn't rule anything out".

Questions 1-7

Do the following statements summarise the opinions of the writer in Reading Passage 1?
In boxes 1-7 of your answer sheet write:

YES if the statement agrees with the writer
NO if the statement does not agree with the writer
NOT GIVEN if there is no information about this in the passage

1. Evidence so far indicates that further study of Shoemaker-Levy will be worthwhile.
2. There are no physical differences between asteroids and comets.
3. The observation of Shoemaker-Levy was an immensely expensive undertaking.
4. David Levy, being an amateur astronomer, was not taken seriously.
5. The dark points of impact indicate there is water on Jupiter.
6. It is now possible to perform detailed studies of Jupiter's internal structure.
7. It is possible that more impacts have occurred since this article was written.

Questions 8-12

Complete the sentences below with words taken from Reading Passage 1. Use **NO MORE THAN THREE WORDS** for each answer. Write your answers in boxes 8-12 of your answer sheet.

8. The comet was observed using the _____.
9. A comet's tail is usually made up of substances that evaporate quickly such as _____.
10. Researchers had expected to see evidence of _____ at the impact site, showing the comet's composition.
11. The presence of sulphur compounds may account for the _____ of Jupiter's clouds.
12. The destabilised atmosphere may lead to the formation of another permanent _____ on Jupiter.

Reading Passage 2

You should spend about 20 minutes on Questions 13-26 which are based on Reading Passage 2.

In all societies the body is "dressed", and everywhere dress and adornment play symbolic and aesthetic roles. The colour of clothing often has special meaning; a white wedding dress symbolising purity, black clothing indicating remembrance for a dead relative. Uniforms symbolise association with a particular profession. For many centuries purple, the colour representing royalty, was to be worn by no one else. And of course, dress has always been used to emphasise the wearer's beauty, although beauty has taken many different forms in different societies. In the 16th century in Europe, for example, Flemish painters celebrated women with bony shoulders, protruding stomachs and long faces, while women shaved or plucked their hairlines to obtain the fashionable egg-domed forehead. These traits are considered ugly by today's fashion.

The earliest forms of "clothing" seem to have been adornments such as body painting, ornaments, scarifications (scarring), tattooing, masks and often constricting neck and waist bands. Many of these deformed, reformed or otherwise modified the body. The bodies of men and of children, not just those of women, were altered - there seems to be a widespread human desire to transcend the body's limitations, to make it what it is, by nature, not.

Dress in general seems then to fulfil a number of social functions. This is true of modern as of ancient dress. What is added to dress as we ourselves know it in the west is fashion, of which the key feature is rapid and continual changing of styles. The growth of the European city in the 14th century saw the birth of fashionable dress. Previously, loose robes had been worn by both sexes, and styles were simple and unchanging. Dress distinguished rich from poor, rulers from ruled only in that working people wore more wool and no silk, rougher materials and less ornamentation than their masters.

However, by the fourteenth century, with the expansion in trade, the growth of city life, and the increasing sophistication of the royal and aristocratic courts, rapidly changing styles appeared in western Europe. These were associated with developments in tailored and fitted clothing; once clothing became fitted, it was possible to change the styling of garments almost endlessly. By the fifteenth and sixteenth centuries it began to seem shameful to wear outdated clothes, and those who could afford to do so discarded clothing simply because it had gone out of style. Cloth, which was enormously expensive, was literally, and symbolised, wealth in medieval society.

In modern western societies no form of clothing does not feel the impact of fashion. Fashion sets the terms of all dress behaviour - even uniforms have been designed by

Paris dressmakers; even nuns have shortened their skirts; even the poor seldom go in rags - they wear cheap versions of the fashions that went out a few years ago and are therefore to be found in second-hand shops and jumble sales.

Even the determinedly unfashionable wear clothes that represent a reaction against what is in fashion. To be unfashionable is not to ignore fashion, it is rather to protest against the social values of the fashionable. The hippies of the 1960s created a unique appearance out of an assortment of secondhand clothes, craft work and army surplus, as a protest against the wastefulness of the consumer society. They rejected the way mass production ignored individuality, and also the wastefulness of luxury.

Looked at in historical perspective the styles of fashion display a crazy relativism. At one time the rich wear cloth of gold embroidered with pearls, at another beige cashmere and grey suiting. In one epoch men parade in elaborately curled hair, high heels and rouge, at another to do so is to court outcast status and physical abuse. It is in some sense inherently ironic that a new fashion starts from rejection of the old and often an eager embracing of what was previously considered ugly. Up to the early twentieth century, the tan had always been the sign of a worker, and therefore avoided by those with pretensions to refinement, who were wealthy enough not to have to work in the sun. However, in the 1920s the tan became the visible sign of those who could afford foreign travel. A tan symbolised health as well as wealth in the 1930s. Recently its carcinogenic dangers have become known, and in any case it is no longer truly chic because many more people than in earlier decades can afford holidays in the sun.

Despite its apparent irrationality, fashion cements social solidarity and imposes group norms. It forces us to recognise that the human body is not only a biological entity, but an organism in culture. To dress the way that others do is to signal that we share many of their morals and values. Conversely, deviations in dress are usually considered shocking and disturbing. In western countries a man wearing a pink suit to a job interview would not be considered for a position at a bank. He would be thought too frivolous for the job. Likewise, even in these "liberated" times, a man in a skirt in many western cultures causes considerable anxiety, hostility or laughter.

However, while fashion in every age is normative, there is still room for clothing to express individual taste. In any period, within the range of stylish clothing, there is some choice of colour, fabric and style. This is even more true last century, because in the twentieth century fashion, without losing its obsession with the new and the different, was mass produced. Originally, fashion was largely for the rich, but since the industrial period the mass-production of fashionably styled clothes has made possible the use of fashion as a means of self-enhancement and self-expression for the majority.

Questions 13-14

Using information from the text, answer the following questions. Write the appropriate letter A-D in boxes 13 and 14 on your answer sheet.

13. In early times, dress showed the difference between rich and poor in
- A style of clothing
 - B fabric and decoration of clothing
 - C colour of clothing
 - D cost of clothing.
14. What development in clothing made the concept of fashion possible?
- A cost of the fabric
 - B shame at outdated clothing
 - C sophistication of decoration
 - D tailored and fitted clothing.

Questions 15-18

Using information from the text, answer the following questions. **USE NO MORE THAN THREE WORDS** in your answer. Write your answers in boxes 15-18 on your answer sheet.

- 15 & 16. Several unlikely groups of people in the twentieth century are stated to have been affected by fashion. Name **TWO** of these groups.
- 17 & 18. What **TWO** items of clothing are given as examples of unsuitable clothing for western men to wear?

Questions 19-23

Complete the following table on the early history of fashion, using words and phrases from the box below. Write the appropriate letter A-J of your answers in boxes 19-23 on your answer sheet.

A unfashionable clothes thrown away	F brightly coloured clothing
B loose robes	G simple decorations worn
C fitted clothing	H styles began to change slowly
D rapidly changing styles appeared	I 15th & 16th centuries
E up to the 14th century	J growth of cities

PERIOD	CLOTHING BEHAVIOUR	TYPES OF CLOTHING WORN
Earliest times	_____ (19) _____	scars and masks
_____ (20) _____	simple, unchanging styles	_____ (21) _____
14th century	_____ (22) _____	_____ (23) _____

Questions 24-26

The following table contains several of the writer's arguments from the reading passage. Match the argument with the evidence used in the passage to support it by writing the appropriate letter A-I in boxes 24-26 on your answer sheet. One has been done as an example.

Note: there are more statements of evidence than you need.

ARGUMENT	EVIDENCE
<p>Example</p> <p>People who wear bright clothes in shops and restaurants often pay more for these items.</p>	<p>A Fashion is now mass-produced.</p> <p>B Today people are wary of men who wear bright coloured clothes to work.</p> <p>C At some times wealthy people wear bright, heavily ornamented clothes, at some times they wear dark clothing in simple styles.</p> <p>D Pale skin became unfashionable and suntanned skin became more fashionable.</p> <p>E Many people can afford holidays in the sun.</p> <p>F Black clothes are worn when someone has died.</p> <p>G Hippies wore secondhand clothes to protest against wastefulness.</p> <p>I Styles were simple and unchanging.</p>
<p>24. Clothing can carry symbolic meaning in colour or decoration. supported by _____</p>	
<p>25. A change in fashion often means accepting what used to be thought unattractive. supported by _____</p>	
<p>26. People who wear unfashionable clothes may do so for a reason. supported by _____</p>	

Reading Passage 3

You should spend about 20 minutes on Questions 27-42 which are based on Reading Passage 3.

Car manufacturer Henry Ford's 1908 Model T automobile was his twentieth design over a five-year period that began with the production of the original Model A in 1903. With his Model T, Ford finally achieved two objectives. He had a car that was designed for manufacture, and one that was easily operated and maintained by the owner. These two achievements laid the groundwork for the revolutionary change in direction for the entire motor vehicle industry.

The key to mass production wasn't the moving, or continuous, assembly line. Rather, it was the complete and consistent interchangeability of parts and the simplicity of attaching them to each other. These were the manufacturing innovations that made the assembly line possible. To achieve interchangeability, Ford insisted that the same gauging system be used for every part all the way through the entire manufacturing process. Previously, each part had been made to a slightly different gauge, so skilled fitters had to file each part individually to fit onto the other parts of the car. Ford's insistence on working-to-gauge throughout was driven by his realisation of the payoff he would get in the form of savings on assembly costs. Ford also benefited from recent advances in machine tools able to work on pre-hardened metals. The warping or distortion that occurred as machined parts were being hardened had been the bane of previous attempts to standardise parts. Once the warping problem was solved, Ford was able to develop innovative designs that reduced the number of parts needed and made these parts easy to attach. For example, Ford's four-cylinder engine block consisted of a single, complex casting. Competitors cast each cylinder separately and bolted the four together.

Taken together, interchangeability, simplicity, and ease of attachment gave Ford tremendous advantages over his competition.

Ford's first efforts to assemble his cars, beginning in 1903, involved setting up assembly stands on which a whole car was built, often by one fitter. In 1908, on the eve of the introduction of the Model T, a Ford assembler's average task cycle - the amount of time he worked before repeating the same operations - totalled 514 minutes, or 8.56 hours. Each worker would assemble a large part of a car before moving on to the next. For example, a worker might put all the mechanical parts - wheels, springs, motor, transmission, generator - on the chassis (body), a set of activities that took a whole day to complete. The assembler/fitters performed the same set of activities over and over at their stationary assembly stands. They had to get the necessary parts, file them down so they would fit (Ford hadn't yet achieved perfect interchangeability of parts), then bolt them in place.

The first step Ford took to make this process more efficient was to deliver the parts to each work station. Now the assemblers could remain at the same spot all day. Later in

1908, when Ford finally achieved perfect part interchangeability, he decided that the assembler would perform only a single task and move from vehicle to vehicle around the assembly hall. By August of 1913, just before the moving assembly line was introduced, the task cycle for the average Ford assembler had been reduced from 514 to 2.3 minutes. Naturally, this reduction spurred a remarkable increase in productivity, partly because complete familiarity with a single task meant the worker could perform it faster, but also because all filing and adjusting of parts had by now been eliminated. Workers simply popped on parts that fitted every time.

Ford soon recognised the problem with moving the worker from assembly stand to assembly stand: walking, even if only for a yard or two, took time, and jam-ups frequently resulted as faster workers overtook the slower workers in front of them. Ford's stroke of genius in the spring of 1913, at his new Highland Park plant in Detroit, was the introduction of the moving assembly line, which brought the car past the stationary worker. This innovation cut cycle time from 2.3 minutes to 1.19 minutes; the difference lay in the time saved in the worker's standing still rather than walking and in the faster work pace which the moving line could enforce.

Ford's moving assembly consisted of two strips of metal plates - one under the wheels of each side of the car - that ran the length of the factory. At the end of the line, the strips, mounted on a belt, rolled under the floor and returned to the beginning. Since Ford needed only the belt and an electric motor to move it, his cost was minimal - less than \$3,500 at Highland Park. The moving assembly speeded up production so dramatically that the savings he could realise from reducing the inventory of parts waiting to be assembled far exceeded this trivial outlay.

Even more striking, Ford's discovery simultaneously reduced the amount of human effort needed to assemble an automobile. What's more, the more vehicles Ford produced, the more the cost per vehicle fell. Even when it was introduced in 1908, Ford's Model T, with its fully interchangeable parts, cost less than its rivals. By the time Ford reached peak production volume of 2 million identical vehicles a year in the early 1920s, he had cut the real cost to the consumer by an additional two-thirds.

To appeal to his target market of average consumers, Ford had also designed unprecedented ease of operation and maintainability into his car. He assumed that his buyer would be a farmer with a modest tool kit and the kinds of mechanical skills needed for fixing farm machinery. So the Model T's owner's manual, which was written in question-and-answer form, explained in sixty-four pages how the owner could use simple tools to solve any of the 140 problems likely to occur with the car.

Ford's competitors were as amazed by this designed-in repairability as by the moving assembly line. This combination of competitive advantages catapulted Ford to the head of the world's motor industry and virtually eliminated craft-production companies unable to match its manufacturing economies: Henry Ford's mass production drove the auto industry for more than half a century and was eventually adopted in almost every industrial activity in North America and Europe.

Questions 27-30

Using information from the reading passage, fill in the dates on the table below. Write your answers in boxes 27-30 on your answer sheet.

DATE	EVENT
(27) _____	Ford Model A car produced
(28) _____	Ford Model T car began production
(29) _____	Henry Ford introduced the moving assembly line
(30) _____	Ford produced 2 million identical vehicles every year

Questions 31-34

The following boxes summarise improvements in productivity by the Ford company, 1903 to 1913. Show the correct sequence for the improvements by matching A, B, C or D with Stages 1, 2, 3, or 4. Write the appropriate letters A, B, C or D in boxes 31-34 on your answer sheet.

- A**
- each assembler performed one task only
 - each assembler moved around the hall from car to car

- B**
- parts were delivered to each work station
 - each assembler remained in the same place all day

- C**
- cars were placed on a moving assembly line
 - each assembler performed one task only
 - each assembler remained stationary

- D**
- each car was built on an assembly stand
 - each fitter performed many jobs on one car
 - each fitter collected the necessary parts

31. Stage 1: _____

32. Stage 2: _____

33. Stage 3: _____

34. Stage 4: _____

Questions 35-39

According to the writer in Reading Passage 3, are the following actions an advantage or a disadvantage in mass production?

In boxes 35-39 write:

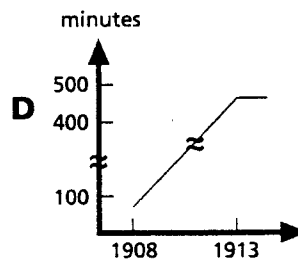
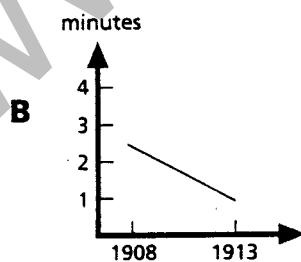
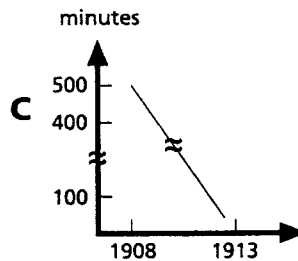
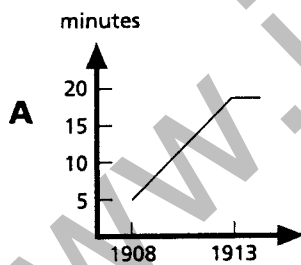
- A** if the action is stated to be an advantage
D if the action is stated to be a disadvantage
NG if no evaluation is given in the text

35. Between 1903 and 1908 there were 20 designs of the Ford automobile.
 36. Workers shaped each part to fit individually with all other parts.
 37. Ford's four-cylinder engine block consisted of a single, complex casting.
 38. Workers had complete familiarity with a single task.
 39. Workers collected the necessary parts and took them to their work station.

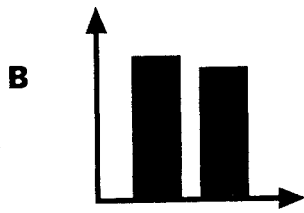
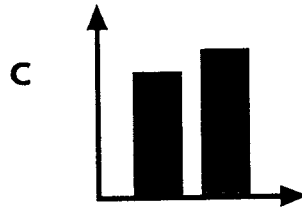
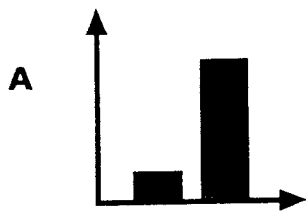
Questions 40-42

Choose the appropriate letter A-D and write it in boxes 40-42 on your answer sheet.

40. Which graph best describes the change in task time resulting from workers performing a single task only?

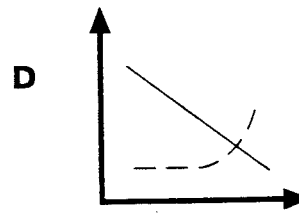
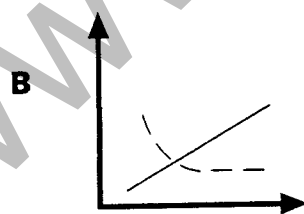
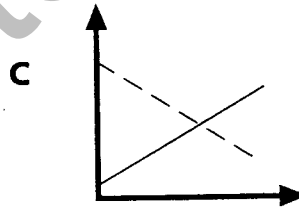
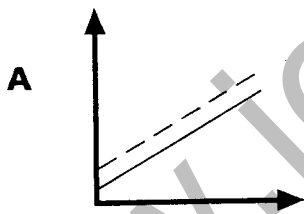


41. Which graph best describes the cost of building a moving assembly line as opposed to the money saved?



■ = cost
■ = money saved

42. Which graph best describes the relationship between the number of vehicles produced and the cost of the vehicles?



— no. of vehicles produced
--- cost per vehicle