Practice Test 48

Reading Passage 1

You should ideally spend about 20 minutes on Questions 1-13, which are based on Reading Passage 1.

Reflecting on the Mirror

A. In all likelihood, the first mirrors would have simply been pools of water that reflected the image of the one who looked into it. Nature's mirror, while cheap and readily accessible, must have also been quite frustrating with the slightest disturbance on the surface of the water making it difficult to see clearly. It is not altogether clear when the first man-made mirrors were produced, but mirrors made of brass are mentioned in the Bible, and after that mirrors of bronze were in common use among the ancient Egyptians, Romans and Greeks. In addition to bronze, the Greeks and Romans experimented with polished silver to produce simple mirrors.

B. Crude forms of glass mirrors were first made in Venice in 1300. Small sheets of glass were cut from disks made by a spinning process. When this glass was backed with a covering of tin or lead, a 'mirror' resulted. During the early periods of their development, mirrors were rare and expensive. France had glass factories, but only in Venice, Italy was the secret of mirror foiling known. The chemical process of coating a glass surface with metallic silver was discovered by German chemist Justus von Liebig in 1835, and this advance inaugurated the modern techniques of mirror making.

C. By the end of the 17th-century, mirrors were made in Britain and the manufacture of mirrors developed subsequently into an important industry in many other European countries. People wore them in their hats or set them like jewels in their rings. Society glittered and shone like the firmament. A little later on, America was gripped by the mirror craze, only this time they were interested in larger mirrors. In house after house in residential districts and eastern cities, there would be one long mirror after another placed between two front parlour windows.

D. In the manufacture of mirrors today, plate glass is cut to size, and all blemishes are removed by polishing with rouge. The glass is scrubbed and flushed with a reducing solution before silver is applied. The glass is then placed on a hollow, cast-iron tabletop, covered with felt, and kept warm by steam. A solution of silver nitrate is poured on the glass and left undisturbed for about 1 hour. The silver nitrate is reduced to metallic silver, and a lustrous deposit of silver gradually forms. The deposit is dried, coated with shellac, and painted. Most present-day mirrors, therefore, are made up of these layers. Glass is

used on top because it is smooth, clear, and protects the reflective surface. A mirror needs to be very smooth in order for the best reflection to occur.

E. Mirrors may have a plane or curved surfaces. A curved mirror is concave or convex depending on whether the reflecting surface faces toward the centre of the curvature or away from it. Curved mirrors in ordinary usage have surfaced of varying shapes. Perhaps the most common is spherical. Spherical mirrors produce images that are magnified or reduced – exemplified, by mirrors for applying facial makeup and by rear-view mirrors for vehicles. Cylindrical mirrors are another common type of shape. These focus a parallel beam flight to a linear focus. A paraboloidal mirror is one which is often used to focus parallel rays to a sharp focus, as in a telescope mirror, or to produce a parallel beam from a source at its focus, such as a searchlight. A less common but useful shape is ellipsoidal. Such a mirror will reflect light from one of its two focal points to the other.

F. While the mirror is the focus of the production, the frame plays an important albeit slightly lesser role as the anchor by which the mirror is affixed to its proper place. From the late 17th century onward, mirrors and their frames played an increasingly important part in the decoration of rooms. Complementing the shiny reflective mirror, the early frames were usually of ivory, silver, ebony, or tortoiseshell or were veneered with walnut, olive, and laburnum. Needlework and bead frames were also to be found. Craftsmen such as Grinling Gibbons often produced elaborately carved mirror frames to match a complete decorative ensemble. The tradition soon became established of incorporating a mirror into space over the mantelpiece; many of the early versions of these mirrors, usually known as *over mantels,* were enclosed in glass frames.

G. The architectural structure of which these mirrors formed a part became progressively more elaborate. Focusing heavily on the effect created by mirrors, 18th-century designers such as the English brothers Robert and James Adam created fireplace units stretching from the hearth to the ceiling. Oil the whole, mirror frames reflected the general taste of the time and were often changed to accommodate alterations in taste – frames usually being cheaper and hence more easily replaced than the mirror itself. By the end of the 18th century, painted decoration largely supplanted carving on mirrors, the frames being decorated with floral patterns or classical ornaments. At the same time, the French started producing circular mirrors.

H. Usually surrounded by a neoclassical gilt frame that sometimes supported candlesticks, these mirrors enjoyed great popularity well into the 19th Improved skill in mirror making also made possible by the introduction of the cheval glass, a freestanding full-length mirror, supported on a frame with four feet. These were mainly used for dressing purposes, though occasionally they had a decorative function. New, cheaper techniques of mirror production in the 19th century led to a great proliferation in their use. Not only were they regularly incorporated into pieces of furniture – such as wardrobes and sideboards – they were also used in everything from high-powered telescopes to decorative schemes in public places. Their popularity continues today. Through them, infants are able to develop an awareness of their individuality through ‘mirror games’. This type of emotional reflection stimulates babies to move various parts of their body and even promotes verbal

utterances.

Questions 1-5

Do the following statements reflect the claims of the writer in Reading Passage 1?

In boxes **1-5** on your answer sheet 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

1The Creeks arid Egyptians used polished silver to make mirrors.

2 The first man-made mirrors were made of bronze.

3 Only the wealthy could afford the first mirrors.

4The first mirrors in America were used for decoration.

5 Spherical mirrors are commonly used in cars.

Questions 6-9

Complete the labels on Diagram A below.

Write the correct letter **A-J** next to **6-9** on your answer sheet.

Diagram A: Magnified side-view of a mirror

A rouge

B cast iron

C felt

D steam

E shellac

F glass

G metal

H silver nitrate paint

I reducing solution

Questions 10-13

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

Write your answers next to **10-13** on your answer sheet.

10 The type of mirror used for looking at the stars is

A paraboloidal.

B spherical.

C cylindrical.

D ellipsoidal.

11 17th-century craftsmen

A blended mirror frames well with other household furniture.

B hung mirrors above fireplaces.

C used mirror frames as a focus for home decoration.

D established floral patterns as a standard for mirror frames.

12 18th-century craftsmen

A designed furniture which highlighted the unique properties of

mirrors.

B experimented largely with mirror frames made of ebony and ivory.

C built spherically-shaped minors.

D experimented with ceiling mirrors around fireplaces.

13 **19th-century craftsmen**

A used mirrors less than any previous time in history.

B introduced mirrors as learning tools.

C used mirrors extensively in bedroom furniture.

D etched designs into mirrors.

Reading Passage 2

You should spend about 20 minutes on Questions 14-26 which are based on Reading Passage 2.

Effort And Science To Win

Winning nowadays is not only a question of disciplined training: The triumph of victory today involves the collaboration of several medical specialists who combine their particular knowledge in an effort to help each athlete to reach their potential.

A. In Mexico, the Medicine Direction and Applied Sciences of the National Commission of Deporte analyse all aspects of sports science from the role of the auditory system in sporting achievement to the power of the mind and its role in the ability to win. Everything, it seems, is open to scrutiny. Recently, the focus has been evaluating the visual acuity of cyclists and long-distance runners but they also focus on the more traditional areas of sports research, especially psychology, nutrition, anthropology, biochemistry and odontology[1]. From budding child athletes as young as 9 to the more mature-aged sportsperson, the facility at Deporte has attracted some of Mexico's most famous sporting and Olympic hopefuls.

B. "The study of elite athletes is now more scientific than ever," says doctor Francisco Javier Squares, "after each competition, athletes are exposed to vigorous medical

examinations and follow-up training in order to help the US arrive at a program that is tailor-made. “The modern athlete has become big business, no longer is there a one-size-fits-all approach. For example, in the past two people, both 1.70 meters tall and weighing 70 kilograms would have been given the same program of athletic conditioning – now this idea is obsolete. It may be that the first individual has 35 kgs of muscle and 15 kgs of fat and the other person, although the same height and weight may have 30 kgs of muscle and 20 kgs of fat. Through detailed scientific evaluation here at our facility in Deportee,” says Squares, “… we are able to construct a very specific training programme for each individual.”

C. Whereas many countries in the world focus on the elevation of the glorious champion, the Mexican Olympic team takes a slightly different approach. Psychologically speaking an athlete must bring to his endeavour a healthy dose of humility. As Squares said, “When an athlete wins for Mexico, it is always as a result of a combined team effort with many people operating behind the scenes to realise the sporting achievement. When an athlete stands on the dais, it is because of great effort on the part of many.”

D. As is often the case in some poorer countries, sportsmen and women are stifled in their development due to budgetary constraints. However, this has not been a factor for consideration with the team in Mexico. The Mexican government has allocated a substantial sum of money for the provision of the latest equipment and laboratories for sports research. In fact, the quality of Mexico’s facilities puts them on par with countries like Italy and Germany in terms of access to resources. One example of sophisticated equipment used at the Mexican facility is the hyperbaric chamber. This apparatus is used to enhance oxygen recovery after a vigorous physical workout. Says Squares, “When you breathe the air while inside a hyperbaric chamber the natural state of the oxygen does not change. Green plants produced oxygen; modern technology just increases the air pressure. This does not change the molecular composition of oxygen. Increased pressure just allows oxygen to get into tissues better. Due to our purchase of the hyperbaric chamber, athletes are able to recover from an intense workout in a much shorter space of time. We typically use the chamber for sessions of 45 to 60 minutes two or three times per week.”

E. When pushed to the limit, the true indicator of fitness is not how hard the heart operates, but how quickly it can recover after an extreme workout. Therefore, another focus area of study for the team in Mexico has been the endurance of the heart. To measure this recovery rate, an electroencephalograph (EEG) is used. The EEG enables doctors to monitor the brainwave activity from sensors placed on the scalp. Athletes exert intense effort for a sustained period after which they are given time to rest and recover. During these periods between intense physical exertion and recovery, doctors are able to monitor any weaknesses in the way the heart responds. The CCG has had a big impact on our ability to measure the muscular endurance of the heart.

F. In 1796, the life expectancy of a human being was between 25 and 36 years, in 1886 that number basically doubled to between 45 and 50. In 1996, the life expectancy of an average Mexican stood at around 75 years. People are living longer and this is due in

large part to the advances of modern science. It is not all sophisticated medical equipment that is playing a part; although lesser in impact, basic advances in engineering are also greatly assisting. Take, for example, a professional tennis player. In the past, most tennis players' shoes were constructed with fabric and a solid rubber sole. These shoes were of poor construction and resulted in hip and foot injuries. Today the technology of shoe construction has radically changed. Now some shoes are injected with silicone and made of more comfortable, ergonomic[1] construction. This has helped not only the elite but also the recreational sportsperson and thus, helps in the preservation of the human body.

[1] objects designed to be better adapted to the shape of the human body

Questions 14 -17

The passage has eight paragraphs labeled **A-F**

Which paragraph contains the following information?

Write the correct letter **A-F** in boxes **14-17** on your answer sheet.

NB You may use **any letter more than once**.

14 the natural process of oxygen production

15 standard after-competition procedure

16 the areas of study undertaken to improve athletic performance

17 the Mexican viewpoint on winning

Questions 18 -20

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

Write your answers next to **18-20** on your answer sheet.

18 **The hyperbaric chamber**

A helps athletes to breathe more easily.

B increases the level of oxygen an athlete breathes.

C decreases the pressure of the oxygen for Mexican athletes.

D speeds up recovery time for athletes.

19 **The electroencephalograph (EEC)**

A measures how fast brainwaves move during exercise.

B helps doctors to determine heart problems.

C measures how hard the heart works during exercise.

D strengthens the heart muscle in athletes.

20 **The life-span of individuals in Mexico has increased due to**

A medical improvements.

B more committed doctors.

C better-made sporting equipment.

D advances in ergonomics.

Questions 21-26

Do the following statements agree with the information given in Reading Passage 2?

In boxes **21 -26** on your answer sheet 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

21 There are limits to the level of sporting enquiry.

22 Specific athletic programs differ mostly between men and women

23 Mexico and Germany have similar sporting resources.

24 Lack of money is what stops athletic improvement in some poor countries.

25 Wealthy countries enjoy greater athletic success.

26 Mexican athletes have the support of their government.

Reading Passage 3

You should spend about 20 minutes on Questions 27-40 which are based on Reading Passage 3.

Fueling The Future

A. The world's 750 million motor vehicles emit well over 900 million metric tonnes of carbon dioxide each year. Traffic-related air pollution has been responsible for 6% of deaths per year and is associated with certain forms of leukaemia, inflammatory lung diseases, increased cardiovascular disease, low birth-weight babies and male infertility. It stands to reason that tackling traffic-related air pollution should be high on any government's list of priorities. Thus, in an attempt to minimise this situation many governments around the world have been looking at ways to implement alternative fuel sources. The most widely accepted way of doing this is to replace the crude oil that our vehicles currently run on with renewable, 'environmentally friendly' One serious contender put forward as a solution to the pollution problem is ethanol. Ethanol is a type of alcohol made by fermenting plant material. Water and organic matter from the plants including com, sorghum, sugar cane and wood are mixed together and fermented to make ethanol.

B. After fermentation, there are three layers remaining. The first is water and small particles of grain and alcohol. It takes on a syrup consistency. The second layer is the remaining grain, which is 17 per cent dry matter. The third layer is the actual ethanol – a colourless, volatile, flammable liquid. It is the only layer sold and accounts for exactly one-third of the total dry matter used for its production. There are three primary ways that it is used as a fuel for transportation: as a blend of 10 per cent ethanol with 90% unleaded fuel (E10); as a component of reformulated gasoline and; as a primary fuel with 85 parts of ethanol blended with 15 parts of unleaded fuel (E-85). In the 1800s in the USA, it was first used as lamp fuel. Later on, due to skyrocketing oil prices in the 1970s, E10 was produced as a type of 'fuel-extender' for vehicles with E-85 being produced in the 1990s. Brazil has also used ethanol-blended fuels. Like America, the high prices in the 1970s prompted a government mandate to produce vehicles which could be fuelled by pure ethanol Today there are more than 4,2 million ethanol-powered vehicles in Brazil (40 per cent passenger-carrying) which consume 4 billion gallons of ethanol annually. Today, Brazil is the largest transportation ethanol fuel market in the world.

C. Given that Ethanol is made from a variety of plant substances when it is used in fuel production, it increases the monetary value of feed grains grown by farmers. In fact, in the USA, the largest ethanol consuming nation in the world, ethanol production adds £4.5 billion to the farm economy every year. According to the United States Department of Agriculture, ethanol production adds 30 cents to the value of a bushel of corn. Another of its benefits, according to Brian Keating, deputy chief of Australia's Commonwealth Scientific and Industrial Research Organisation (CSIRO) is that a 10% ethanol blend (E10) would reduce greenhouse gas emissions by 2 to 5% over the full lifecycle of ethanol production and consumption. Said Keating, "The precise benefits depend on specific factors in the production cycle. An important component of which is the energy source used by the ethanol factory. If it's being powered by coal or oil, there are obviously associated with greenhouse gas emissions." In America, The Clean Air Act of 1990 and the National Energy Policy Act of 1992 have both created new market opportunities for a cleaner, more efficient fuels with many state governments in America's Mid-west purchasing fleet vehicles capable of running on E-85 fuels.

D. Although it makes a good fuel, some drawbacks have been documented. The economics of ethanol production are improving as the technology improves but ethanol has two problems: It does not explode like gasoline, and it can absorb water, which can cause oxidation, rust and corrosion. The claims of possible damage to vehicles from the use of ethanol blends above 10% have therefore attracted considerable negative publicity. Compared to diesel – the standard fuel in the heavy moving industry – ethanol is known to have a lower energy content so ethanol trucks require larger fuel tanks to achieve the same range as a diesel-powered vehicle. In Australia, a government review' into the impacts of a 20% ethanol blend on vehicles found the information to be insufficient or conflicting but did identify a number of problems such as the possible perishing and swelling of elastomeric and plastic materials in fuel systems. Stakeholders in the motor vehicle industry have slated that warranties on motor vehicles and pump dispensing equipment could be at risk with the use of blends above 10% ethanol. Principle economist for the Australian Bureau of Agriculture Andrew Dickson points out that the money sugarcane growers get for their cane is not determined by the domestic consumption or domestic demand for ethanol, it is entirely determined by the world sugar market and the world trade in molasses He believes that the only way the sugar industry' can benefit from the existence of an ethanol industry is if they invest in the ethanol industry. "The sugar producer does not get any more money for their molasses so what incentive do they have to produce any more?." The cost of production also represents some challenges.

E. In Australia, fuel ethanol costs around 70 cents per litre compared with around 35 cents per litre for unleaded petrol. In America, one report revealed that even with government assistance, ethanol is dose to 35 per cent more than the price of diesel. Consequently, the production of ethanol requires government assistance to be competitive. A recent study by the Australian Bureau of Agricultural and Resource Economies found that without assistance, large-scale production of ethanol would not be commercially viable in Australia. Regardless of whether the Australian sugar industry will benefit from a mandated 10% ethanol mix, the expansion of ethanol production would certainly lead to increased economic activity in farming areas. It is inevitable that some expansion would be

at the expense of existing industry. If ethanol becomes more popular, there will soon be more plants producing it. This means there will be a need for workers for the plants. The American National Ethanol Vehicle Coalition (NBVC) projects that employment will be boosted by 200,000 jobs and the balance of trade will be improved by over $2. The future of ethanol looks promising, for better or worse ethanol looks to be a serious contender for tomorrow's fuel.

Questions 27-31

Do the following statements agree with the claims of the writer in Reading Passage 2?

In boxes **27-31** on your answer sheet write

YES, if the statement reflects the claims of the writer

NO, if the statement contradicts the claims of the writer

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

27 The need to control air pollution is why ethanol came into use.

28 Brazil uses more ethanol for transportation than America.

29 Select food crops become more expensive due to ethanol production

30 The Australian sugar industry will benefit from the production of ethanol.

31 Primary ethanol (E-85) has been extensively tested in Australia.

Questions 32-35

Look at the following list of descriptions **(Questions 32-35)** and the list of fuel types below.

Match each description of the fuel type.

Write the correct letter **A-D** in boxes **32-35** on your answer sheet.

NB You may use **any letter more than once**.

32 costs about half the price of ethanol

33 reacts poorly with some metals

34 is the reason why trucks have been fitted with larger fuel tanks

35 commonly used in the trucking industry

A regular gasoline

B unleaded gasoline

C ethanol

D diesel

Question 36-40

Classify the following statements according to which country they apply to.

Write the appropriate letters **A-D** in boxes **36-40** on your answer sheet.

A Australia only

B America only

C both Australia and America

D neither Australia nor America

36 makes ethanol out of sugar cane

37 uses more ethanol than any other country in the world.

38 receives government assistance for ethanol production.

39 proved ethanol production is costly.

40 their government bought ethanol-friendly cars.

Answers

[restrict paid=true]

Reading Passage 1

1