

STEEP

أهم ١٠٠ قطعة في ستيب



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Passage 1

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1 This gardener wants to work at.....

A a residence

C an office

B a hospital

D a farm

2 When can the gardener be contacted?

A weekday evenings

C any time

B weekend evenings

D Saturday

PASSAGE 2

- 1) A matryoshka doll refers to a set of dolls of decreasing word size placed one inside the other, The word a diminutive form of the Russian female first name 3 "atryoshka", "Matryona". The first doll set in Russia was **carved** in 1890 by Vasily Zvyozdochkin from a design by Sergey Malyutin, who was a folk crafts painter. Traditionally the outer layer is a woman, dressed in a sarafan, a long traditional Russian dress.
- 2) A set of matryoshkas consists of a wooden figure which separates, top from bottom, to reveal a smaller figure of the same sort inside, which has, in turn, another figure inside of it, and so on. The number of nested figures is traditionally not less than five, but can be much more, up to several dozen with sufficiently fine craftsmanship. Modern dolls often yield an odd number of figures but this is not an absolute rule; the fine craftsmanship. Modern dolls often yield an odd number of figures but this is not an absolute rule; the original set, for instance, had an even number. The form is approximately cylindrical, with a rounded to be for the head, tapering toward the bottom.
- 3) It is believed Zvyozdochkin and Malyutin were inspired as no protruding features by a doll from Honshu, the main island of Japan. Sources differ in their descriptions, describing either a round, hollow doll or a nesting doll, portraying a bald old Buddhist monk.
- 4) Zvyozdochkin's creations were first presented at the Exposition Universal in the year 1900 in Paris, where the toy earned a bronze medal. Soon after, matryoshka dolls were being made in several places in Russia and shipped around the world including to Europe, Asia and America.
- 5) Matryoshka dolls are often designed to follow a particular theme, and during Perestroika, the leaders of the Soviet Union became a common theme of matryoshkas. In one such example, the largest, outside figure was that of Mikhail Gorbachev, followed by Leonid Brezhnev Yuri Andropov and Konstantin Chernenko almost never appear due to the short length of them of their respective terms), Nikita Khushchev, Joseph Stalin and finally the smallest, Vladimir Lenin.

1 The best title for this passage is.....

A Arts and Crafts

C Modern Handicrafts

B Children's Toys

D Russian Wood figurines

2 The purpose of Paragraph (1) is to.....

- A** describe traditional Russian clothes.
- B** describe the origin and appearance of the dolls in Russia.
- C** provide a profile of Zvyozdochkin and Malyutin.
- D** provide an explanation of the Russian name Matryona.

3 The word “carved” in Paragraph 1) is closest in meaning to.....

- A** sourced
- B** planned
- C** shaped
- D** copied

4 According to Paragraph (2), what is required for a set to have a large number of nesting dolls?

- A** wooden figures
- B** expert workmen
- C** cylindrical form
- D** NO protruding features

5 The word “this” in Paragraph 2) refers to.....

- A** modern dolls
- B** several dozen
- C** absolute rule
- D** odd numbers

6 According to Paragraph (3), the idea of nesting dolls most likely started in.....

- A** Paris
- B** Japan
- C** Russia
- D** America

7 According to Paragraph (5), some rulers are excluded from being made into dolls because they

- A** were the smallest
- B** were NOT Soviet leaders
- C** were NOT in power for long
- D** are NOT part of the common theme

PASSAGE 3

What type of social media do you use?

	Men	Women	Total
Twitter	34	42	76
Instagram	36	41	77
Linked in	11	3	14
Our square	9	6	15
Facebook	24	36	60

How many hours a day o you spend on social media?

	Men	Women	Total
0-1	2	3	5
1-3	17	24	41
4-6	19	28	47
7+	5	2	7

1 Which form of social media is least popular among women?

- A Twitter B **Linked in**
C Instagram D Facebook

2 Which form of the social media is the most popular?

- A Twitter B Linked in
C **Instagram** D Facebook

3 How much time do most men spend on social media?

- A 0 - 1 B 1 - 3
C **4 - 6** D 7 +

4 How much time do most people spend on social media?

- A 0 - 1 B 1 - 3
C **4 - 6** D 7 +

PASSAGE 4

Message to Tom

"Steve: Can I come and see you next weekend?"

Tom: on Friday I am busy, but Saturday will be OK."

1 What did Steve ask in his message to Tom?

- A Are you usually busy at weekends?
- B What do you usually do on Fridays?
- C What are you going to do on Saturday?

D Can I come and see you next weekend?

PASSAGE 5

- 1) Muhammad Ali is a famous heavyweight boxer. He was born in Louisville, Kentucky, in the USA in 1942. His birth name was Cassius Marcellus Clay. When he was young, he was an amateur boxing champion. In 1960, when he was still an amateur, he won the light heavyweight gold medal at the Olympic games in Rome.
- 2) After that, Ali became a professional heavyweight boxer. He was 1.88 meters tall and his fighting weight was about 95 kilograms. He had a very successful professional boxing career. In fact, he won the world heavyweight championship three times. The first time was when he beat the former champion, Sonny Liston, in 1964. In the same year, he became a Muslim and **assumed** the name Muhammad Ali.
- 3) In 1967 he refused to be drafted for the Vietnam War. Although a jury in a trial found him guilty, later the Supreme Court said that he had had the right to refuse
- 4) Ten years later, in 1974, he became world champion again when he beat George Foreman in Zaire. He became champion for the third time in 1978 after beating Leon Spinks. Ali fought his last professional fight in 1981 against Trevor Berbick and then retired from boxing
- 5) Heavyweight boxers ate usually very strong but not fast, but Ali was very strong and very fast. He said his style was "to float like a butterfly and sting like a bee." Ali liked to talk a lot and people called him the Louisville Lip.

1 Ali won an Olympic gold Medal in.....

- A Kentucky.
- B Louisville.
- C Rome.
- D Zaire.

2 According to Paragraph (1), when Ali won the gold medal, he was

- A a professional boxer
- B a heavyweight boxer
- C an amateur boxer
- D a strong boxer

3 According to Paragraph (2), Ali changed his name

- A** one year before he defeated Sonny Liston.
- B** two years after he defeated Sonny Liston.
- C** in the same year he defeated Sonny Liston.
- D** six months before he defeated Sonny Liston.

4 The word “assumed” in Paragraph (2) is closest in meaning to

- B** took
- C** posited
- B** threw
- D** suspected

5 According to Paragraph (3), who supported Ali when he refused to join the army?

- A** his fans.
- C** the Vietnamese.
- B** the jury.
- D** the supreme court.

6 Ali became heavyweight champion for the third time after beating.....

- A** Leon Spinks.
- C** George Forman.
- B** Sonny Liston.
- D** Trevor Berbick.

7 How old was Muhammed Ali when he became Muslim?

- A** 34
- C** 22
- B** 36
- D** 1960

8 How old was Ali when he won the championship for the third time?

- A** 34
- C** 22
- B** 36
- D** 62

PASSAGE 6

A reputable travel and tourism company requires the following in the areas of Abha – Jizan - Klamis Mushait – Jeddah - Dammam:

Tour and Hotel Consultant

- Bachelor's degree in Hotel Management and Tourism
- Previous experience with travel and tourism agents
- Knowledge of and experience with visa procedures
- Fluency in English, spoken and written
- Proficiency in dealing with people

Airline Reservation Consultant

- Bachelor's degree
- Familiarity with reservation systems
- Fluency in English, spoken and written
- Neat appearance

Accountant

- Bachelor's degree in Accounting
- Experience in dealing with the IATA system
- Fluency in English, spoken and written

Preference is given to Saudi nationals

1 Which qualifications are required for all three positions?

- A** fluent English and Saudi nationality.
- B** ability to deal with people and a good appearance.
- C** a bachelor's degree and fluent English.
- D** job experience and fluent English.

2 What kind of company is trying to fill these positions?

- A** a hotel chain.
- B** an accounting firm.
- C** an airlines company.
- D** a travel and tourism company.

3 What information is NOT given in the passage?

- A** academic requirements.
- B** salaries and benefits.
- C** job titles.
- D** Locations.

PASSAGE 7

From: <ahmad.adbullah@globalconsiliants.com>

To: <hamad.salih@ globalconsultants.com>

Date: October 28, 2013

Subject: Meeting with PR

"I'm having a meeting with the public relations specialist tomorrow afternoon at 1 p.m. I need you to have five final hard copies of our updated company profile ready as well as the PowerPoint presentation preloaded onto the conference room computer with everything set up. Mr. Ali has been asked to make sure there are enough refreshments available for up to ten people. Please make sure you arrive prior to the start time, as I was not pleased when the guests and I arrived before you at the last event. In addition, make sure to bring the extra materials that I discussed with you in my office yesterday. As I will not return to the office today and will be out tomorrow morning. I won't see you until the meeting tomorrow afternoon."

Thank you, Ahmad Abdulla President Global Consultant.

1 Why was Mr. Ahmad NOT pleased with Mr. Hamad?

- A Mr. Hamad forgot to bring extra materials at a past event.
- B Mr. Hamad arrived later than him at a past event.**
- C Mr. Hamad was unable to attend a past event.

2 When did Mr. Ahmad and Mr. Hamad have their last meeting?

- A the day after the message was sent.
- B the day before the message was sent.**
- C the morning that the message was sent.
- D a few days before the message was sent.

PASSAGE 8

- 1) Hijama, also known as "cupping", was one of the treatments recommended by Prophet Muhammad (peace be upon him). It is still practiced in some parts of the world and has many medical benefits. When Hijama is performed, small cuts are made at specific body sites, and impure blood is taken out. This blood is collected in small glass "cups". Afterwards, the body feels refreshed and energized, having been cleansed of impurities and toxins or poisons.
- 2) Hijama can sometimes offer relief where other forms of treatment or medications have failed. It is highly recommended in cases of lethargy and dullness, and for people with headaches, indigestion or sleeping problems. These complaints can be signs that the body is suffering from some form of toxicity.
- 3) A qualified Hijama practitioner must use clean instruments and utensils and perform the therapy carefully and with great sensitivity. Treatment is often performed on the 17th, the 19th, or the 21st of the lunar month. When done in coordination with a healthy diet and exercise, Hijama can give long-lasting, satisfactory results. Ideally, it should be done at least once a year.

1 According to Paragraph (1), what is one benefit of Hijama?

- A** refreshed blood.
- B** an energized body.
- C** satisfactory results.
- D** cupping blood.

2 According to Paragraph (2), Hijama is used to treat all of the following EXCEPT

- A** signs of toxicity
- B** indigestion
- C** lethargy
- D** cuts on the body

3 According to Paragraph (2), what is the cause of some headaches?

- A** cleansed blood
- B** sleeping programs
- C** toxins in the body
- D** failed medication

4 According to Paragraph (3), how often should Hijama be performed on a person?

- A** 3 days every month.
- B** once every lunar month.
- C** every other month.
- D** once a year or more.

5 What can we understand about Hijama?

- A** It should NOT be used along with exercise.
- B** It can give relief which lasts for 17, 19 or 21 days.
- C** It can put impure blood into the body using small glass "cups".
- D** It should be performed using clean instruments.

PASSAGE 9

- 1) Like all insects, ants have six legs. Each leg has three joints. The legs of the ant are very strong so they can run very quickly. If a man could run as fast for his size as an ant can, he could run as fast as a racehorse. Ants can lift 20 times their own body weight. An ant brain has about 250,000 brain cells. A human brain has 10 billion brain cells, so a colony of 40,000 ants has collectively the same number of brain cells as one human brain.
- 2) The average life expectancy of an ant is 45-60 days. Ants use their antennae not only for touch, but also for smell. The head of the ant has a pair of large, strong jaws. The jaws open and shut sideways like a pair of scissors. Even adult ants cannot chew and swallow solid food. Instead, they swallow the juice which they squeeze from pieces of food and throw away the dry part that is left.
- 3) The ant has two eyes, each of which is made of many smaller eyes, so they are called **compound** eyes. The abdomen of the ant contains two stomachs. One stomach holds the food for itself and the second stomach is for food to be shared with other ants. Like all insects, the outside of their body is covered with a hard armor called the exoskeleton. Ants have four distinct growing stages, the egg, larva, pupa and the adult are classified as a special group of wasps.
- 4) There are over 10,000 known species of ants. They all live in social groups usually called colonies. A colony has one or more queens. The sole duty of a queen is to lay eggs. The worker ants, all of whom are female, cannot produce eggs; they take care of the queen and the eggs she produces. Since the worker ants are sterile, their roles within the colony might be looking after the young, providing food, or defending the nest from unwanted visitors. Ants are clean and tidy insects, so some worker ants are given the job of taking the rubbish from the nest and putting it outside in a special rubbish dump. Each colony of ants has its own smell. In this way, intruders can be recognized immediately. Many ants, such as the red species, have stingers which they use to defend their nest. However, some ants - like black ants and wood ants - have no stingers, but can squirt acid to defend themselves and the colony.
- 5) Ants are interesting creatures. They have very tiny bodies but live in a complex social community. **They** are not simply pests, as many people think; in point of fact, they represent a positive example of how planning and teamwork should work in our societies.

1 What is the main idea of the passage?

- A There are different kinds of ants.
- B Ants are similar to other insects.
- C **Ants are fascinating creatures.**
- D Ants present a good example for other insects.

2 According to Paragraph (2), which of the following is TRUE?

- A Compared to other insects' ants live for a short time.
- B Ants cut their food and then eat it.
- C **Some of the ant's senses work through its antennae.**
- D Only young ants can swallow solid food.

3 According to Paragraph (2), adult ants can only swallow food that is.....

- A dry
- B solid
- C chewed
- D **liquid**

4 According to Paragraph (3), an exoskeleton is common to

- A larva
- B **all insects.**
- C only wasps.
- D only ants.

5 The word “compound” in Paragraph (3), is closest in meaning to

- A **complex.**
- B whole.
- C round.
- D complete.

6 According to Paragraph (4), all worker ants can.....

- A lay eggs.
- B squirt acid.
- C sting their intruders.
- D **protect their territory.**

7 According to Paragraph (4), ants live in.....

- A families.
- B **colonies**
- C isolation.
- D small group.

8 According to Paragraph (4), ants can know outsiders by their

- A size.
- B **smell.**
- C sound.
- D behavior.

9 The pronoun “they” in Paragraph 5) refers to.....

- A **ants**
- B pests.
- C bodies.
- D people.

PASSAGE 10

- 1) Over the roar of the fire, Mike heard Ben shout, "Hurry! The fire is almost on us!" Mike's arms were sore and tired, but he swung his axe even faster. He didn't even stop to wipe the tears from his stinging eyes. The **greedy** fire kept coming. The more the fire destroyed, the more **it** wanted. Mike worked shoulder to shoulder with the other smokejumpers to build a firebreak. His only thought was to stop **the flaming monster** that was raging through the forest.
- 2) At last, the smokejumpers finished the firebreak. If the fire were powerful enough, it would jump over the firebreak that they had worked so hard to make. Then they would have to start all over again. Mike stood motionless, his face black with ash, his shirt wet with sweat. He was too exhausted to move because he had given all of himself to fighting the fire. He turned his head and noticed Ben watching him.
- 3) Suddenly all that Ben had taught Mike about proving his bravery was clear. A man was not brave if he did something just to prove **his** courage. He was brave only when he forgot about himself. Today Mike had showed that he cared very much about the others with whom he was working.

1 According to Paragraph (1), it was hard for Mike to do his job because.....

- | | |
|---|--------------------------------------|
| A his arms were strained and painful | B he COULDN'T think very well |
| C he was busy with other things | D he DIDN'T work with others |

2 According to Paragraph (1), Mike's only thought as he tried to put out the fire was.....

- | | |
|-----------------------------------|------------------------------------|
| A to please his boss | B to pump more water |
| C to stop the blazing fire | D to get something to drink |

3 According to Paragraphs (1) and (2), the smokejumpers-built a.....to stop the fire from spreading.

- | | |
|--------------------|---------------------|
| A fence | B trench |
| C firebreak | D water line |

4 The word "greedy" in Paragraph (1) means wanting.....

- | | |
|---------------|-------------------|
| A more | B less |
| C some | D a little |

5 The pronoun "it" in Paragraph (1) refers to.....

- | | |
|-------------------|--------------------|
| A the axe | B the fire |
| C the roar | D the smoke |

6 The words "the flaming monster" in Paragraph (1) refer to.....

- | | |
|-----------------------------|---------------------------|
| A Ben | B the fire |
| C the burning forest | D the smokejumpers |

7 According to Paragraph (2), Mike was too exhausted to move because

- A he had sweat all over him
- B he was covered with black ash
- C Ben did NOT give him much help
- D he had given so much to fight the fire

8 According to Paragraph 3), Ben taught Mike that being brave involves.....

- A working with proper tools
- B avoiding fire hazards
- C losing one's courage
- D caring for others

9 The pronoun his in Paragraph 3) refers to

- A a man
- B a fireman
- C Mike
- D Ben

PASSAGE 11

- 1) An American-born giant panda will soon be travelling to China. The Chinese government has an agreement with foreign zoos to lend giant pandas out only for scientific study. After a few years, they, and any cubs they may produce, must all be returned to China. Mei Lan, a three-year-old female, is being prepared for her trip to China, where her parents were born. A special FedEx flight from the U.S. is being arranged for her.
- 2) Chinese Zookeepers are getting ready for her arrival by planning a special diet, and even language lessons for her. They are advertising for a **tutor** to teach Mei Lan Chinese. The caretakers at her new home, the Chengdu Panda Research Center in Sichuan, want to help her adapt quickly and feel comfortable in her new environment. Mei Lan has lived at a zoo in the city of Atlanta, Georgia, since her birth, and she is unfamiliar with Chinese. The teacher must have a bachelor's degree or higher and be fluent in both English and Chinese.

1 The word "tutor" in Paragraph (2) is closest in meaning to.....

- A speaker
- B scientist
- C keeper
- D teacher

2 According to Paragraph (2), why do the Chinese zookeepers want Mei Lan to learn Chinese?

- A so that she can speak with her caretakers
- B so that she will feel at home in China
- C so that she can forget her English
- D so that she will like her new diet

3 According to Paragraph (2), Where has Mei Lan been living?

- A in the Chengdu Panda Research Center
- B in an American research center
- C in Atlanta, Georgia
- D in Sichuan, China

PASSAGE 12

- 1) If we look at the night sky carefully, we will see that the stars are of many different colors. Some are red, others are yellow and some are blue. This is also shown when we take color photographs of the night sky. You can take such a photograph with an ordinary camera as long as **it** is kept steady. A thirty second exposure is **sufficient**.
- 2) Astronomers have been able to classify stars according to color. They have found that blue stars are the largest and red stars the smallest. However, there are a few stars which cannot be classified in this way. These are the superstars. For example, Ryiejol is a blue superstar as big as 40,000 suns and Beetle juice is a superstar with a size equal to 17,000 suns.
- 3) Suppose an astronomer observes two stars, one **brighter** than the other. If neither of them is a superstar, he will know immediately that the brighter star is closer. Astronomers have instruments like light meters which can measure the brightness of a star quite accurately. It is possible to measure a star's distance from the earth if astronomers know the color, brightness and whether or not it is a superstar.

1 The pronoun "it" in Paragraph (1) refers to the.....

- A photograph
- B exposure
- C camera
- D star

2 According to Paragraph 1, the exposure time needed to photograph the night sky in color is.....

- A 10 seconds
- B 15 seconds
- C 20 seconds
- D 30 seconds

3 The word "sufficient" in Paragraph (1) is closest in meaning to

- A enough
- B necessary
- C required
- D significant

4 According to Paragraph (2), Beetle juice is a superstar

- A as big as the su
- B smaller than the sun
- C as big as 17,000 suns
- D as big as 40,000 suns

5 The word "brighter" in Paragraph (3) is closest in meaning to.....

- A more colorful
- B more shiny
- C smaller
- D larger

6 According to Paragraphs (2) and (3), astronomers classify stars according to the following EXCEPT.....

- A size
- B color
- C shape
- D brightness

7 Which of the following colors is NOT mentioned in the passage?

- A green
- B yellow
- C blue
- D red

8 What is the main idea of the passage?

- A Astronomers have been able to measure how far the stars are from each other.
- B Astronomers have certain instruments to measure the color of the stars.
- C We can know the color of the stars by taking a photograph of the sky at night.
- D Stars can be categorized according to color and size.

PASSAGE 13

- 1) The Holy Quran tells us that insects form communities Surat al-An'am, 38) and that they can communicate more than 1,400 years afterwards, has accepted that this information is indeed correct. Now, scientists in the United Kingdom are learning that some of **these amazing creatures** may also have feelings and emotions similar to those of humans.
- 2) At Newcastle University, they are trying to discover how some insects feel. In recent years, honeybee numbers have been declining worldwide at a disturbing rate. Many explanations have been given for this. Some say the bees are dying because of disease and pesticides. Others say it may be due to pollution or microwave towers. At any rate, this is a very serious situation, for humans as well as for the bees. At least one-third of the world's crops depend on bees. Farmers are worried. What about the bees? How do they feel? Are they scared, sad or depressed?
- 3) The researchers trained a group of bees to tell the difference between two smells. After one smell, they were always given a sweet sugar reward. After the other smell, they were given a bitter substance. They quickly learned to choose the smell with the sweet prize and to stick out their tongues to get it. The scientists wanted to see what the bees would do if they were put in a stressful situation. They shook up half of the bees; to make them think they were in danger. These stressed bees refused to put out their tongues for new smells, and only chose the old smell which they knew would be followed by a sweet treat. Even though there was an equal chance that a strange smell would taste good, it seemed they believed it would taste bad and were afraid to try it. These bees had become "pessimists". The other half-the unstressed bees were much more likely to try tastes from new smells, thus remaining "optimists".
- 4) When humans are stressed, anxious, worried or depressed, they have lower levels of the brain hormone serotonin. So did the stressed bees. This may mean that the feelings of anxious and stressed bees are similar to those of humans with mood disorders. This knowledge, along with further investigations into bee behavior and "feelings" can hopefully be used to understand and remedy their declining numbers, for their sake and for ours.

1 The words "these amazing creatures" in Paragraph (1) refer to.....

- | | |
|---------------------|-------------------------|
| A bees | B insects |
| C scientists | D communities |

2 Why are bees important to humans?

- | |
|---|
| A They have communities and can communicate |
| B They are necessary to produce our food crops. |
| C They are becoming more numerous than us. |
| D They have feelings like us. |

3 Which paragraph describes how the scientists trained the bees?

- | | |
|-------------------------------|------------------------|
| A Paragraph (1) | B Paragraph (2) |
| C Paragraph (3) | D Paragraph (4) |

4 What can we understand about optimists in Paragraph (3)?

- A** They are afraid to try new experiences.
- B** They prefer the smells they learn first.
- C They are NOT afraid to try new things.**
- D** They feel stressed and worried.

5 What is the main idea of Paragraph (4)?

- A** Humans and bees have the same hormones.
- B** Humans are more affected by stress than bees.
- C Understanding similar feelings in humans and bees may help both.**
- D** Training stressed bees is important for treating human mood disorders.

PASSAGE 14

“Adam is not as tall as Eric”

1 The passage says that

- A Eric is taller**
- B** Eric is shorter
- C** Adam is taller
- D** Eric and Adam are short

PASSAGE 15

1) Husayn ibn Abdullah Ibn Sina is well known in the Arab world simply as «Ibn Sina». He is also well known in the West by the name «Avicenna» which simplifies the pronunciation. In 980 A.D. Avicenna was born in Bukhara which is now part of Russia and known as Uzbek. By the age of 10, he was already proficient in the Qur'an and Arabic classics. By the age of 16, he finished Islamic law studies, geometry, anatomy, logic and philosophy. By the age of 18, he completed the study of medicine. Soon after that, he became the Prime Minister and the physician of the Ruler of Bukhara. The Ruler was impressed by the intelligence and endurance of his Prime Minister and opened for him Library which was unique in its literary richness.

2) Avicenna's life was extraordinarily exhausting. All day long he was busy with his patients and government work. At night, he was busy lecturing and writing books. After many years of hard work and many achievements, Avicenna died in 1037 A.D. at the age of 57.

3) Avicenna wrote 100 treatises: 21 of them were major of which 16 were in medicine. He wrote a book in medicine named Al Qanon fi Al Tibb. It was translated into many languages. Al Qanon fi Al Tibb is an encyclopedia containing more than one million words. It consists of five volumes.

1 The word “proficient” in Paragraph (1) is closest in meaning to

- A skilled**
- B** trained
- C** dedicated
- D** disciplined

2 According to paragraph (1) why does the Western world use a different name for Ibn-Sina?

- A** They did NOT like Arabic names.
- B** They did NOT want the world to know his nationality.
- C** Names change when used by speakers of a different language.
- D** He did NOT speak their language.

3 According to Paragraph (1), Soon after Ibn Sina finished his study of medicine, he became the.....

- A** manager of the Royal Library.
- B** assistant of the Prime Minister.
- C** teacher of the Ruler of Bukhara.
- D** doctor for the Ruler of Bukhara.

4 According to Paragraph (2), which statement describes Avicenna's life?

- A** He worked mainly during the day.
- B** He scarcely worked at night.
- C** He used to travel a lot.
- D** He worked very hard.

5 According to Paragraph (3), Al Qanon fi Al Tibb, consists of

- A** 5 volumes
- B** 16 encyclopedias
- C** 21 chapters
- D** 100 treatises

6 According to Paragraph (3), which of the following is TRUE about Al Qanon fi al Tibb?

- A** It has never been translated.
- B** It has been translated into many languages.
- C** It has been translated into a few languages.
- D** It has not been translated into the Russian language.

PASSAGE 16

- 1) The paper we use today is made by machine. Trees are cut up and processed into a mixture called wood pulp. The pulp, containing tiny cellulose fibers, is pressed and rolled out to form sheets of paper.
- 2) The first manmade writing material was not paper. About 4,000 years ago, the ancient Egyptians took the fibrous stems of the papyrus plant, flattened them, laid them crosswise and pressed them down to stick them together. When dried, this made a piece of papyrus that could be written on.
- 3) Paper was first made in China around the year 105 CE by a man called Ts'ailun. He found a way to make paper from the stringy inner bark of the mulberry tree. The bark was pounded in water to separate the fibers. This mixture was then poured into a bamboo tray to let the water drain out. After that, the soft mat of paper was moved onto a smooth, flat surface to dry. Later, someone discovered that the paper could be improved by brushing it with starch to make it stronger.
- 4) Chinese traders travelled around Asia as far as Samarkand. There, they met with Arab merchants who learned the secret of making paper and took it to Spain. Afterwards, the art of papermaking spread throughout the rest of Europe.
- 5) Since then, many kinds of machines have been invented and improved methods discovered for making paper. One of the most important, for example, was a machine developed in France in 1798. This machine could make a continuous sheet or web of paper. Before, paper could only be produced in separate sheets.

1 According to Paragraph (2), what did the early Egyptians use to make their writing material?

- | | |
|------------------------|--------------------|
| A mulberry bark | B wood pulp |
| C bamboo | D papyrus |

2 The word "them" in Paragraph (2) refers to

- | | |
|----------------------------|----------------------------|
| A Ancient Egyptians | B writing materials |
| C papyrus stems | D paper |

3 The first real paper was made in

- | | |
|-----------------|--------------------|
| A China | B Egypt |
| C France | D Samarkand |

4 Who introduced the paper-making process to Europe?

- | | |
|--------------------|--------------------------|
| A Ts'ailun | B Chinese traders |
| C the Arabs | D the Spanish |

5 Which component is necessary for making both paper and papyrus?

- | | |
|-----------------------|---------------------------|
| A tree bark | B tree wood |
| C plant starch | D fibrous material |

PASSAGE 17

Unit 1

Origin of Hispanic Culture: Europe 1

Unit 2

Origin of Hispanic Culture: America 20

Unit 3

Religion in the Hispanic World 35

Unit 4

Revolutionary Movements of the century 60

1 which unit would most likely discuss prayer in Hispanic Culture?

A Unit 1

B Unit 2

C **Unit 3**

D Unit 4

2 which unit would most likely discuss violent changes in society in Hispanic countries?

A Unit 1

B Unit 2

C Unit 3

D **Unit 4**

PASSAGE 18

- 1) Language is a way to communicate. We begin to learn language as infants and become accustomed to our native language. language therefore becomes a problem for immigrants, especially between the first and second generations. This language barrier also results in the second generation losing their identity.
- 2) First generation immigrants in America **suffer** in lots of areas because of language difficulties. Naturally, they want their children to speak English both at home and at school in order to be more successful. This results in their children losing their ethnic identity and even more. Ignoring their parents because there is now a language between them.
- 3) For example, my three children and they were all born in the States. The eighteen years- old daughter speaks both English and Korean very well. She has no problems talking with her parents, but she does have trouble understanding Korean jokes, and there are sometimes misunderstandings. The second daughter is fourteen years old and she resists speaking Korean. My aunt often gets upset with her because she is much **Americanized** and **they** cannot understand each other. Even when my aunt punishes her, this daughter does not understand what my aunt is talking about. I felt sympathy for my aunt whenever my fourteen-year-old cousin said, "Mom, what is your problem?"
- 4) The third child is a twelve-year-old son. He speaks English to his parents and my aunt speaks Korean to him as she does to the second daughter. He also has a problem communicating with his parents. My aunt is trying to encourage him to learn both languages, but it is very hard for him because he speaks English all day and fail to understand why he should learn Korean.
- 5) Immigrants try to preserve their native language in their new country while string to learn a new language. My aunt was her children to succeed in the US, but she also wants to help them understand the Korean language in order to understand the Korean heritage. The second generation often gets confused about their Identity. My aunt's children, for example, see themselves as being different from others in both places in the US they look Korean and in Korea they act like Americans. My cousins told me that when they visited Korea a few years ago, they felt different because they wore different clothes and walked differently.
- 6) Language is important and valuable for any reasons. Immigrants must imagine a strong mutual understanding with the family and enable their children to appreciate the heritage. Being at ease in using both the first and second languages is important not only for attaining familial harmony, but also in helping the second generation establish the identity.

1 What is the main idea of the passage?

- | | |
|---|--|
| A the importance of second language. | B immigrants and their education. |
| C language and identity. | D immigrants in the US. |

2 The word "suffer" in Paragraph (2) is closest in meaning to having

- | | |
|--------------------|-------------------|
| A accidents | B problems |
| C injuries | D skills |

3 According to Paragraph (3), which of the following is NOT TRUE about the 18-year-old daughter?

- | |
|---|
| A She was born in the U.S. |
| B She speaks only English very well. |

- C** She sometimes misunderstands things in Korean.
- D** She communicates better with her parents than her brother and sister do.

4 The pronoun “they” in Paragraph (3) refers to the mother and her

- A** second daughter
- B** eldest daughter
- C** children
- D** son

5 the word “Americanized” in paragraph 3 is closest in meaning to

- A** living in America
- B** usually travelling to America
- C** having American nationality
- D** speaking and behaving like Americans

6 According to paragraphs (3) and (4), the second daughter is

- A** older than her brother
- B** sympathetic to her cousin
- C** not as Americanized as her sister
- D** able to understand her mother easily

7 According to paragraphs (3) and (4), the mother speaks Korean to

- A** Her oldest daughter only
- B** Her two daughters only
- C** Her son only
- D** All of her children

8 According to paragraph (4), the youngest child.....

- A** doesn't speak English at home
- B** has learned English and Korean very well
- C** doesn't understand why he should learn Korean
- D** has a problem communicating with his teachers

9 What does the passage say about miscommunication between immigrants and their children?

- A** It can be only solved if immigrants want
- B** It will NOT happen if teachers try harder
- C** It is caused by the first generation
- D** It can often be a big problem

PASSAGE 19

My uncle Ahmad is a physician. He helps people when they are sick. When his patients go to the office, he may ask them to breathe while he listens to their chest. Then he listens to the sound of the air in their lungs. He may have to ask them many questions and **examine** them to see what is making them sick. He helps people have better health.

1 This passage is about a.....

A university teacher

B **medical doctor**

C patient

D nurse

2 The word **examine** in the passage is closest in meaning to closely.

A talking

B **looking**

C listening

D questioning

PASSAGE 20

- 1) When the personal computer was first released, it did not serve any practical need. Early computers were difficult to program and required great attention to detail. However, many personal computer enthusiasts immediately banded together to build applications and solve problems. These computer enthusiasts were happy to share any programs they built and solutions to problems they found; this collaboration enabled them to more quickly innovate and fix problems.
- 2) As software began to become a business, however, this idea of sharing everything fell out of favor, at least with some. When a software program takes hundreds of man-hours to develop, it is understandable that the programmers do not want to just give it away. This led to a new business model of restrictive software licensing, which required payment for software, a model that is still dominant today. This model is sometimes referred to as closed source, as the source code is not made available to others.
- 3) There are many, however, who feel that software should not be restricted. Just as with those early hobbyists in the 1970s, they feel that innovation and progress can be made much more rapidly if we share what we learn. In the 1990s, with Internet access connecting more and more people together, the open-source movement gained steam. Open-source software is software that makes the source code available for anyone to copy and use. For most of us, having access to the source code of a program does us little good, as we are not programmers and won't be able to do much with it. The good news is that open-source software is also available in a compiled format that we can simply download and install.
- 4) The open-source software is superior to closed-source software. Because the source code is freely available, many programmers have contributed to open-source software projects, adding features and fixing bugs. Many businesses are worried about open-source software precisely because the code is available for anyone to see. They feel that this increases the risk of an attack. Others counter that this openness actually decreases the risk because the code is exposed to thousands of programmers who can incorporate code changes to quickly patch vulnerabilities. Firefox and Apache are two examples of open-source software.

5) There are many arguments on both sides of the aisle for the benefits of the two models. Some benefits of the open-source model are:

- The software is available for free.
- The software source-code is available; it can be examined and reviewed before it is installed.
- The large community of programmers who work on open-source projects leads to quick bug fixing and feature additions. Some benefits of the closed-source model are:
- By providing financial incentive for software development, some of the brightest minds have chosen software development as a career.
- Technical support from the company that developed the software, Information Systems for Business and Beyond.

1 What helped open-source software gain steam?

- | | |
|-----------------------------|---------------------------------|
| A Internet access | B cheap equipment |
| C software licensing | D Linux operating system |

2 What is one benefit of open-source software?

- | | |
|---|--|
| A It is quite cheap to buy. | B It leads to quick bug-fixing. |
| C It comes with technical support. | D It is superior to closed-source software. |

3 What is one benefit of closed-source software?

- | | |
|--|--|
| A Technical support from the company. | B The software is available for free. |
| C Quick and better updates. | D Access to the source code. |

4 What are two examples of open-source software?

- | | |
|---------------------------------|------------------------------|
| A Fire fox and Microsoft | B Superior and Apache |
| C Firefox and Superior | D Firefox and Apache |

PASSAGE 21

- 1) Psychology is the scientific study of mind and behavior. The word “psychology” comes from the Greek words “psyche, meaning life, and “logos,” meaning explanation. Psychology is a popular major for students, a popular topic in the public media, and a part of our everyday lives. Television shows often feature psychologists who provide personal advice to those with personal or family difficulties. Crime dramas such as CSI, Lie to Me, and others feature the work of forensic psychologists who use psychological principles to help solve crimes. And many people have direct knowledge about psychology because they have visited psychologists, for instance, school counselors, family therapists, and religious, marriage, or bereavement counselors.
- 2) **Because** we are frequently exposed to the work of psychologists in our everyday lives, we all have an idea about what psychology is and what psychologists do. In many ways, your conceptions are probably correct. Psychologists do work in forensic fields, and they do provide counseling and therapy for people in distress. **But** there are hundreds of thousands of psychologists in the world, and most of them work in other places, doing work that you are probably now aware of.
- 3) Most psychologists work in research laboratories, hospitals, and other field settings where they study the behavior of humans and animals. For instance, experts in the Psychology Department at the University of Maryland study such diverse topics as anxiety in children, the interpretation of dreams, the effects of caffeine on thinking, how birds recognize each other, how people from different cultures react differently in negotiation. Psychologists also work in schools and businesses, and they use a variety of methods, including observation, questionnaires, interviews, and laboratory studies, to help them understand behavior.

1 What do psychologists do to help people who are unhappy in their lives?

- A They advise them to stop drinking coffee
- B They provide them with treatment services,
- C They take them to special hospitals for help.
- D They provide them with advice about their food.

2 Why does the writer use the word “Because” in Paragraph 2)?

- A To show other examples of jobs psychologists do.
- B To explain the result of people talking and dealing with psychologists.
- C To add more information to the definition of psychology and the work of psychologists.
- D To show that psychologists are very good at finding criminals and solving crimes.

3 What does the passage say about the work of most psychologists?

- A It is field research
- B It is forensic science
- C It is TV entertainment,
- D It is personal counseling.

4 Which word can we use to replace the word “But” in paragraph (2)?

- A In addition
- B Therefore
- C Finally
- D However

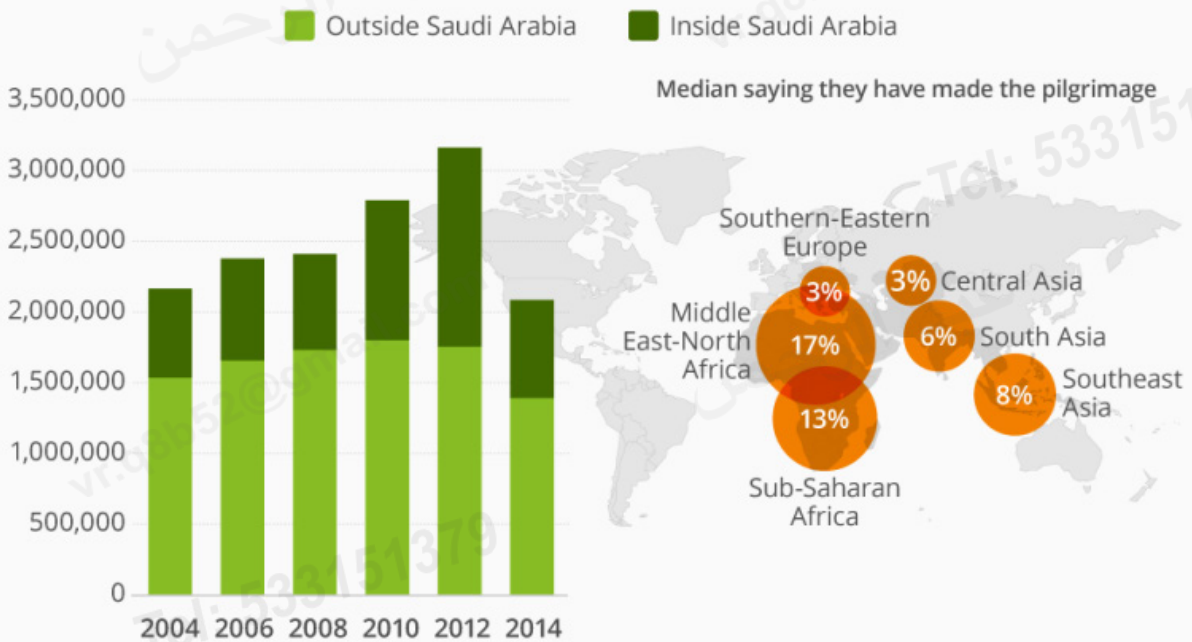
5 What does the writer think about our knowledge of psychology?

- A It is complete.
- B It is INCORRECT.
- C It is from university.
- D It is from experience.

PASSAGE 22

Relatively Few Muslims Have Actually Visited Mecca

The number of pilgrims attending the hajj from 2004 to 2014



Sources: Pew Research Center, Saudi Central Department of Statistics & Information

statista

1 Which year had the most pilgrims to Saudi Arabia?

- A 2002
- B 2008
- C 2010
- D 2012

PASSAGE 23

The World Economic Outlook for Trade

- 1) Although the global economy continued to grow robustly until 2007, economic performance was not equal: growth in the advanced economies slowed and then stopped in 2009, whereas emerging and developing economies continued to grow. Looking ahead, the International Monetary Fund (IMF), an international bank with 186 member nations, expected growth to continue until 2020 in both advanced and emerging developing economies.
- 2) Although the U.S. economy had been growing steadily since 2000 and recorded the longest peacetime expansion in the nation's history, the worldwide recession which began in December 2007 slowed the rate of growth. The IMF estimated that the U.S. economy grew by less than half of 1 percent in 2008 and, because of subprime mortgage lending and other global financial problems, declined 2.5 percent in 2009. International experts recorded global economic growth of 3.9 percent in 2010 and 4.3 percent in 2011, despite the high oil prices.
- 3) Canada and Western Europe: America's leading export partner, Canada, showed a growth rate of 2.6 percent in 2010 and 3.6 percent in 2011. The euro area which declined by 3.9 percent in 2009, grew by 1.0 percent in 2010, and by 1.6 percent in 2011. The United Kingdom and smaller European countries such as Austria, the Netherlands, Sweden, and Switzerland, experienced a recession.
- 4) Mexico and Latin America: America's second largest export customer, Mexico, suffered its sharpest recession ever in 1995, and experienced another major setback in 2009. However, its growth rate in 2010 and 2011 was 4.0 percent and 4.7 percent, respectively. Brazil escaped the recent global economic crisis with only minor setbacks: its growth in 2008 was more than 5 percent, and in 2009 it declined only 0.4 percent. In general, the Latin American and the Caribbean economies are recovering at a robust pace.
- 5) Japan: Japan's economy is regaining momentum. Stronger consumer demand and business investment make Japan less reliant on exports for growth. The IMF puts the growth for Japan at 1.7 percent in 2010 and 2.2 percent in 2011.
- 6) Other Asian Countries: The economic growth in Asia remained strong in 2008 and 2009 despite the global recession. Growth was led by China, where its economy expanded by 8.7 percent in 2009, and by 10 percent and 9.7 percent in 2010 and 2011, respectively. Growth in India slowed modestly to 5.6 percent in 2009. Growth in Indonesia, Malaysia, the Philippines, Thailand, and Vietnam was as expected at 4.7 percent and 5.3 percent in 2010 and 2011, respectively. In short, the key emerging economies in Asia are leading the global recovery. China's emergence as a global economic power has been among the most dramatic economic developments of recent decades. From 1980 to 2004, China's economy averaged a real GDP growth rate of 9.5 percent and became the world's sixth-largest economy. China's total share in world trade expanded from 1 percent in 1980 to almost 6 percent in 2003. By 2004, China had become the third largest trading nation in dollar terms, behind the United States and Germany and just ahead of Japan.
- 7) Emerging Europe: The year 2007 marked the sixth consecutive year during which emerging Europe grew much faster than Western Europe, but growth in many countries was uneven. The global economic crisis that plagued this region finally came

to an end in 2009, and most countries in the region saw positive growth in 2010 and 2011.

8) Commonwealth of Independent States. The growth in this region turned out to be the predicted 3.8 percent in 2010 and 4.0 percent in 2011. Strong growth is expected to continue in Azerbaijan and Armenia. whereas growth is projected to remain stable in Moldova, Tajikistan, and Uzbekistan. After World War II, trade between the United States and the communist nations of Central and Eastern Europe was minimal. The United States maintained high tariff barriers on imports from most of these countries and also restricted their exports. However, since the disintegration of the Soviet Union and the collapse of communism, trade between the United States and Central and Eastern Europe has expanded substantially. The countries that made the transition from communist to market economies quickly have recorded positive growth for several years. Among the nations that have enjoyed several years of positive economic growth are the member countries of the Central European Free Trade Association: Hungary, the Czech Republic, Poland, Slovenia and Slovakia.

1 Who is America's leading export partner?

- A** USA
- B** Canada
- C** Mexico
- D** The United Kingdom

2 What was the percentage of the Euro area economy decline in 2009?

- A** 1 percent
- B** 1.6 percent
- C** 3.9 percent
- D** 10 percent

3 When did the worldwide recession begin?

- A** in 2007
- B** in 2008
- C** in 2009
- D** in 2010

4 What was China's total world trade share in 2003?

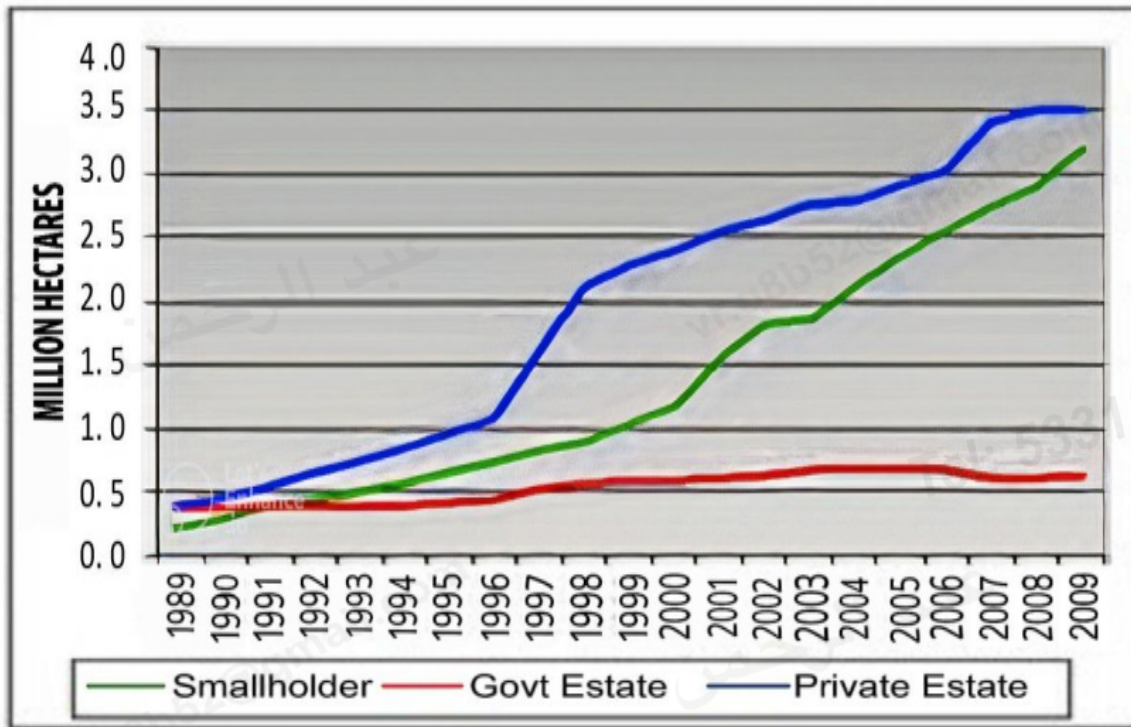
- A** 1 percent
- B** 4.5 percent
- C** 6 percent
- D** 9.5 percent

5 Which country is a member of the Central European Free Trade Association?

- A** Armenia
- B** Poland
- C** Moldova
- D** Turkey

PASSAGE 24

INDONESIA: Palm Area Growth by Owner



Directorate General of Estate Crops, 2009

1 How many hectares of palm area did the Private Estate reach by 2008?

- A 1 million
- B 2.3 million
- C 1.3 million
- D 3.5 million

2 What year did the Government Estate reach 500,000 hectares?

- A 1989
- B 1997
- C 2004
- D 2009

PASSAGE 25

- 1) There's a lot more to trying to evaluate whether a particular risk is big or small than you might think. Flying in airplanes is a case in point.
- 2) You'd think that you could determine the numbers and the odds and that would be it. The annual risk of being killed in a plane crash for the average American is about 1 in 11 million. On that basis, the risk looks pretty small. Compare that, for example, to the annual risk of being killed in a motor vehicle crash for the average American, which is about 1 in 5,000.
- 3) But if you think about those numbers, problems occur right away. Some people fly more and some fly less and some don't fly at all. So if you take the total number of people killed in commercial plane crashes and divide that into the total population, the result, the risk for the average American, may be a good general guide to whether the risk is big or small, but it's not specific to your personal risk.
- 4) Then there is another numbers problem: You can calculate the risk of flying by dividing the number:
 1. Of people who die into the total number of people, which gives you the risk for the average person;
 2. Of victims into the number of total flights all passengers took, which gives the risk per flight; and some don't fly at all.
 3. Of victims into the total number of miles all of them flew, which gives you the risk per mile. So, if you take the total number of people killed in commercial plane crashes and divide that into the total population, the result, the risk for the average American, may be a good general guide to whether the risk is big or small, but it's not specific to your personal risk.
- 5) They all produce accurate numbers, but which one is most relevant to you depends on your personal flying patterns. Some fliers take lots of short flights and some take longer ones. Since the overwhelming majority of the few plane crashes that do occur take place in connection with takeoffs and landings, the risk is less a matter of how far you fly and more a matter of how often. If you are a frequent flier, then the risk per flight means more. For occasional long-distance fliers, the risk per mile means more. A frequent, long-distance flier would want to consider both.

1 What are two words the writer uses to mean «judge»?

- | | |
|-------------------------------|-------------------------------|
| A think / divide. | B find out / take. |
| C evaluate / consider. | D compare / calculate. |

2 What are two words that the writer uses to mean, «Find out»?

- | | |
|------------------------------|---------------------------------|
| A think / divide. | B take / compare. |
| C produce / consider. | D determine / calculate. |

3 How is the writer's view about plane crash risk different from the general belief?

- | | |
|--|--|
| A It is about 1 in 11 million. | B It depends on national averages. |
| C It depends on individual flying habits. | D It depends on the condition of the plane. |

4 According to the passage, which of the following is a fact about most plane crashes?

- A They happen during takeoff and landing.
- B They happen during takeoff and mid-flight.
- C They happen mid-flight and during landing.
- D They happen during medium- and long -distance flights.

5 What can we understand from the passage about airplane crashes?

- A the risk of being killed is biggest in private plane crashes.
- B the risk of crashing is smallest for the average American.
- C the risk of being killed is biggest in commercial plane crashes.
- D the risk of crashing is biggest for frequent, long-distance fliers.

PASSAGE 26

Passage A: Taste

- 1) Our sense of taste involves four basic sensations - sweet, sour, salty, and bitter. All other tastes are mixtures of these. Investigators have, however, been frustrated in their search for specialized nerve fibers for each of the four basic taste sensations.
- 2) Taste is a chemical sense. Inside the little bumps on the top and sides of your tongue are 200 or more taste buds. Each contains a pore that catches food chemicals. These molecules are sensed by 50 taste receptor cells that project antenna-like hairs into the pore. Some of these receptors respond mostly to sweet-tasting molecules, others to salty, sour, or bitter - tasting ones.
- 3) Although taste buds are essential for taste, there is more to taste than meets the tongue. Hold your nose, close your eyes, and have someone feed you various foods. A piece of apple may then be indistinguishable from a piece of raw potato; a piece of steak may taste like cardboard. To savor a taste, we normally breathe the aroma through our nose-which is why eating is not much fun when you have a bad cold, and why people who lose their sense of smell may think they have also lost their sense of taste. Smell not only adds to our perception of taste, it also changes it. A drink's strawberry odor enhances our perception of its sweetness. This is sensory interaction at work, the principle that one sense may influence another. Smell plus taste equals flavor.

Passage B: Smell

- 1) Breaths come in pairs-inhale, exhale-except at two moments: birth and death. Each day, as you inhale and exhale nearly 20,000 breaths of life sustaining air, you bathe your nostrils in a stream of molecules full of scents.
- 2) Like taste, smell is a chemical sense. We smell something when air-carried molecules of a substance reach a tiny cluster of 5 million receptor cells at the top of each nasal cavity. These olfactory receptor cells respond selectively to the aroma of cake baking, to a wisp of smoke, to a friend's fragrance, and they instantly alert the brain through their axon fibers.
- 3) Even nursing infants and mothers have a literal chemistry to their relationship, as they quickly learn to recognize each other's scents. Aided by smell, a mother fur seal returning to a beach crowded with pups will find her own. Our own sense of smell is less impressive than the acuteness of our seeing and hearing. Looking out across a garden we see its forms and colors in exquisite detail and hear its singing birds, yet smell little of it without jamming our nose into the flowers.
- 4) Precisely how olfactory receptors work is a mystery. Unlike light, which can be separated into its spectral colors, an odor cannot be separated into more elemental odors. Thus, the olfaction system has no parallel to the retina, which detects myriad colors with sensory cells dedicated to red, green, or blue. Olfactory receptors recognize odors individually.

1 What can we understand from Passages A and B about both taste and smell?

- A They are more impressive than hearing.
- B They both involve the use of receptor cells.**
- C They both involve olfactory receptor systems.
- D They both enhance the work of our other senses.

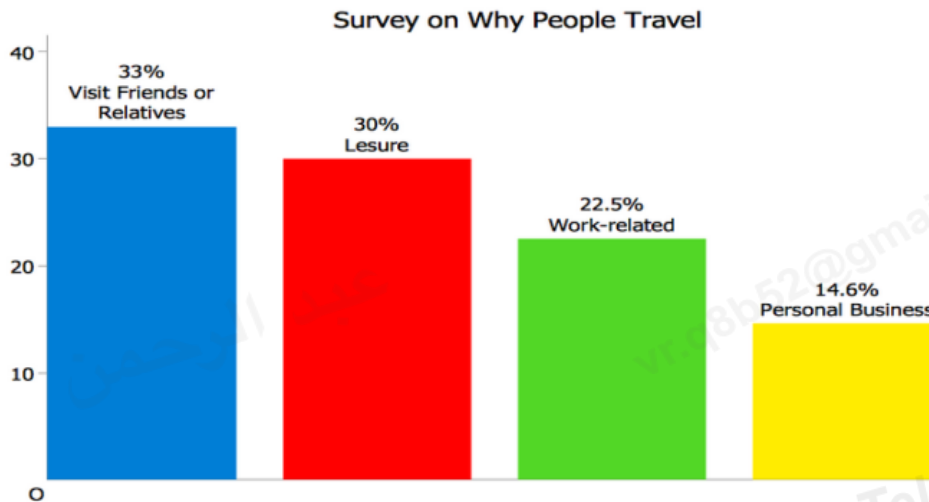
2 What do the passages say about the receptor cells involved in taste and smell?

- A Taste and smell require the use of at least 50 receptors.
- B Taste and smell involve the use of 5 million receptor cells.
- C Both the nose and the tongue have the same number of receptor cells.
- D The receptor cells involved in smell are a lot more than those involved in taste.**

3 According to the passages, why are taste and smell important for us to enjoy food?

- A There is more to taste than meets the tongue.
- B Both senses interact to create flavors.**
- C Both senses have sense receptors.
- D Both are chemical senses.

PASSAGE 27



1 How many people traveled for leisure?

- A 22.5 percent
B 30 percent
C 30 people
D 300 people

PASSAGE 28

Chemical Reactions

- 1) Decomposition of compounds into elements and the combination of elements to make compounds are examples of chemical processes. Using the atomic **theory**, such processes are seen as changes in the combinations of atoms. Such transformations are called chemical reactions. The term reaction means to produce a result. A chemical reaction is a process in which one set of chemicals is mixed and transformed into a new set of chemicals. When charcoal, which is mostly elemental carbon, burns in air, the process is envisioned as carbon atoms combining with diatomic oxygen molecules to produce molecules of carbon dioxide gas.
- 2) As mentioned above, the law of conservation of matter **expresses** that atoms are not created or destroyed in chemical processes. In other words, atoms are conserved in chemical reactions. A reaction is a special process in which certain chemical combinations of atoms transform into new combinations of atoms. In a reaction, the total atom count does not change. Thus, destroying matter by chemical reactions is not possible.

1 The word “theory” in Paragraph (1) is closest in meaning to

- A Idea
B Style
C Sense
D Equipment

2 The word “expresses” in Paragraph (2) is closest in meaning to

- A checks
B approves
C buys
D explains

PASSAGE 29

Free Software

Freeware

1) Freeware is software a user can download from the internet free of charge. Once it has been downloaded, there are no fees associated with using the software (examples include: Adobe, Skype or media players). Unlike free software, freeware is subject to copyright laws and users are often requested to tick a box to say they understand and agree to the terms and conditions governing the software. This basically means that a user is not allowed to study or modify the source code in any way.

Shareware

2) In this case, users are allowed to try out some software free of charge for a trial period. At the end of the trial period, the author of the software will request that you pay a fee if you like it. Once the fee is paid, a user is registered with the originator of the software and free updates and help are then provided. Very often, the trial version of the software is missing some of the features found in the full version, and these don't become available until the fee is paid. Obviously, this type of software is fully protected by copyright laws and a user must make sure they don't use the source code in any of their own software. Permission needs to be obtained before this software is copied and given to friends, family or colleagues.

1 What does Paragraph (1) say about freeware?

- A It has source code that can be changed.
- B It has rules that users must follow.
- C It is necessary to update it often.
- D It is similar to free software.

2 Which sentence gives the main idea of Paragraph (1)?

- A Freeware is software a user can download from the internet free of charge.
- B Once it has been downloaded, there are no fees associated with using the software (examples include: Adobe, Skype or media players).
- C Unlike free software, freeware is subject to copyright laws and users are often requested to tick a box to say they understand and agree to the terms and conditions governing the software.
- D This basically means that a user is not allowed to study or modify the source code in any way.

3 What does Paragraph (2) say about shareware's trial period?

- A You can change the source code.
- B You can share it with friends and family.
- C You can use all of the software's features.
- D You can use the software for a limited time.

4 Which of the following statements about shareware Paragraph (2) support?

- A Users can try it before buying it. B Users can share it easily with anyone.
C Users can download it on their phones. D Users can create their own software.

PASSAGE 30

Psychoanalysis

What are the aims and methods of psychoanalysis?

- 1) Although most of today's therapists do not practice therapy as Sigmund Freud did, his psychoanalytic techniques survive. Psychoanalysis is part of our modern vocabulary, and its assumptions influence many other therapies.

Aims

- 2) Psychoanalysis assumes that many psychological problems are fueled by childhood's residue of supposedly repressed impulses and conflicts. Psychoanalysts try to bring these repressed feelings into conscious awareness, where the patient can deal?
- 3) Psychoanalysis is historical reconstruction. Its goal is to unearth the past in hope of unmasking the present. But how?
- 4) When Freud discarded hypnosis as unreliable, he turned to free association. Imagine yourself as a patient using the free association technique. The analyst invites you to relax, perhaps by lying on a couch. He or she will probably sit out of your line of vision, helping you focus attention on your internal thoughts and feelings. Beginning with a childhood memory, a dream, or a recent experience, you say aloud whatever comes to your mind from moment to moment. It sounds easy, but soon you notice how often you edit your thoughts as you speak, omitting material that seems trivial, irrelevant or shameful. Even in the safe presence of the analyst, you may pause momentarily before uttering an embarrassing thought. You may make a joking remark or change the subject to something less threatening. Sometimes your mind may go blank or you may find yourself unable to remember important details.
- 5) To the psychoanalyst, these blocks in the flow of your free associations indicate resistance. They hint that anxiety lurks and that you are repressing sensitive material. The analyst will want to explore these sensitive areas by making you aware of your resistances and by interpreting their underlying meaning. The analyst's interpretations - suggestions of underlying wishes, feelings, and conflicts - aim to provide people with insight. If offered at the right moment, the analyst's interpretation - of, say, your not wanting to talk about your mother - may illuminate what you are avoiding. You may then discover what your resistances mean and how they fit with other pieces of your psychological puzzle.
- 6) Freud believed that another clue to repressed impulses is your dreams hidden content. Thus, after inviting you to report a dream, the analyst may offer a dream analysis, suggesting its hidden meaning.

- 7) During many such sessions you will probably disclose more of yourself to your analyst than you have ever revealed to anyone. Because psychoanalytic theory emphasizes the formative power of childhood experiences, much of what you reveal will pertain to your earliest memories. You will also probably find yourself experiencing strong positive or negative feelings for your analyst. Such feelings may express the dependency or mingled love and anger that you earlier experienced toward family members or other important people in your life. When this happens, Freud would say you are actually transferring your strongest feelings from those other relationships to the analyst. Analysts and other therapists believe that this transference exposes long repressed feelings, giving you a belated chance to work through them with your analyst's help. By examining your feelings toward the analyst, you may also gain insight into your current relationships.
- 8) Note how much of psychoanalysis is built on the assumption that repressed memories exist. That assumption is now questioned. This challenge to an assumption that is basic to so much of professional and popular psychology is provoking intense debate.
- 9) Critics also say that psychoanalysts' interpretations are hard to refute. If, in response to the analyst's suggested interpretation, you say, «Yes! I see now», your acceptance confirms the analyst's interpretation. If you emphatically say, «No! That doesn't ring true,» your denial may be taken to reveal more resistance. which would also confirm the interpretation. Psychoanalysts acknowledge that it's hard to prove or disprove their interpretations. But they insist that interpretations often are a great help to patients.
- 10) Traditional psychoanalysis is slow and expensive. It requires up to several years of several sessions a week with a highly trained and well-paid analyst. (Three times a week for just two years at \$100 or more per hour comes to about \$30.000.) Only those with high income can afford such treatment.
- 11) Although there are relatively few traditional psychoanalysts, psychoanalytic assumptions influence many therapists, especially those who make psychodynamic assumptions. Psychodynamic therapists try to understand patients' current symptoms by exploring their childhood experiences. They probe for supposed repressed, emotion-laden information. They seek to help people gain insight into the unconscious roots of problems and work through newly resurrected feelings. Although influenced by Freud's psychoanalysis, these therapists may talk to people face to face (rather than out of the line of Vision). once a week (rather than several times Weekly), and for only a few weeks or months (rather than several years).

1 According to psychoanalysis, what two things from childhood feed psychological problems?

- A** repressed impulses and internal thoughts
- B** repressed impulses and conflicts
- C** internal thoughts and dependency
- D** dependency and conflicts

2 What two things can psychoanalysis begin with?

- A** an embarrassing thought or joke
- B** an embarrassing thought or dream
- C** a childhood memory or joke
- D** a childhood memory or dream

3 What are two characteristics of traditional psychoanalysis?

- A trivial and expensive
- B shameful and trivial
- C **slow and expensive**
- D slow and shameful

PASSAGE 31

Stress

- 1) We all feel stressed from time to time - it's all part of the emotional ups and downs of life. Stress has many sources. It can come from our environment, from our bodies, or our own thoughts and how we view the world around us. It is very natural to feel stressed around moments of pressure such as exam time - but we are physiologically designed to deal with stress and react to it.
- 2) When we feel under pressure the nervous system instructs our bodies to release stress hormones including adrenaline, noradrenaline and cortisol. These produce physiological changes to help us cope with the threat or danger we see to be upon us. This is called the "stress response" or the "fight-or-flight" response.
- 3) Stress can actually be positive, as the stress response helps us stay alert, motivated and focused on the task at hand. Usually, when the pressure subsides, the body rebalances and we start to feel calm again. But when we experience stress too often or for too long, or when the negative feelings overwhelm our ability to cope, then problems will arise. Continuous activation of the nervous system - experiencing the "stress response" - causes wear and tear on the body.
- 4) When we are stressed, the respiratory system is immediately affected. We tend to breathe harder and more quickly in an effort to quickly distribute oxygenic blood around our body. Although this is not an issue for most of us, it could be a problem for people with asthma who may feel short of breath and struggle to take in enough oxygen. It can also cause quick and shallow breathing, where minimal air is taken in, which can lead to hyperventilation. This is more likely if someone is prone to anxiety and panic attacks.
- 5) Stress wreaks havoc on our immune systems. Cortisol released in our bodies suppresses the immune system and inflammatory pathways, and we become more susceptible to infections and chronic inflammatory conditions. Our ability to fight off illness is reduced.
- 6) The musculoskeletal system is also affected. Our muscles tense up, which is the body's natural way of protecting ourselves from injury and pain. Repeated muscle tension can cause bodily aches and pains, and when it occurs in the shoulders, neck and head it may result in tension headaches and migraines.
- 7) There are cardiovascular effects. When stress is acute (in the moment), heart rate and blood pressure increase, but they return to normal once the acute stress has passed. If acute stress is repeatedly experienced, or if stress becomes chronic (over a long period of time, it can cause damage to blood vessels and arteries. This increases the risk for hypertension, heart attack or stroke.
- 8) Stress has marked effects on our emotional well-being. It is normal to experience high and low moods in our daily lives, but when we are stressed, we may feel more tired, have mood swings or feel more irritable than usual. Stress causes hyperarousal, which means we may have difficulty falling or staying asleep and experience restless nights. This impairs concentration, attention, learning and memory, all of which are particularly important around exam time. Researchers have linked poor sleep to chronic health problems, depression and even obesity.

- 9) The way that we cope with stress has an additional indirect effect on our health. Under pressure, people may adopt more harmful habits such as smoking to relieve stress. But these behaviors are inappropriate ways to adapt and only lead to more health problems and risks to our personal safety and well-being.
- 10) So learn to manage your stress, before it manages you. It's all about keeping it in check. Some stress in life is normal - and a little stress can help us to feel alert, motivated, focused, energetic and even excited. Take positive actions to channel this energy effectively and you may find yourself performing better, achieving more and feeling good.

1 Where can stress come from?

- A time
- B emotions
- C **our thoughts**
- D the stress response

2 What positive effects can stress have?

- A feeling calm
- B **staying alert**
- C better hearing
- D quick breathing

3 What can cause bodily aches and pains?

- A sport
- B cortisol
- C **muscle tension**
- D the immune system

4 According to the passage, what harmful habits may people adopt under pressure?

- A sleeping poorly
- B gaining weight
- C fighting
- D **smoking**

PASSAGE 32

Intellectual Property

- 1) A type of property of great importance in today's commercial environment is **intellectual** property. Intellectual property consists of the result of one's thoughts, ideas, or inventions. It is not the thought or idea itself, but the result, such as a book or a computer chip. Intellectual property law deals with obtaining protection for one's work, licensing others to use one's work, and enforcing one's rights.
- 2) **Obtaining** protection for intellectual property often includes registration with the proper government agency. Licensing one's work involves negotiating and drafting contracts. Enforcing one's rights often means filing a lawsuit known as an infringement action.
- 3) Intellectual property law includes the law that relates to copyrights, patents, trademarks, and trade secrets. This area of law has grown and developed in the technology age. However, the need for such a law was recognized by the drafters of the Constitution, who gave Congress the right to legislate "To **promote** the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries."

1 According to the passage, what made intellectual property law grow and develop?

- A** a request by authors and scientists
- B the common use of modern technology**
- C** the need to limit people's right to their own work
- D** an effort to make science and arts more professional

2 The word "intellectual" in Paragraph (1) is closest in meaning to

- A thinking**
- B** working
- C** sharing
- D** borrowing

3 The word "obtaining" in Paragraph (1) is closest in meaning to

- A** spending
- B** thinking
- C** writing
- D getting**

4 The word "promote" in Paragraph (3) is closest in meaning to

- A help**
- B** find
- C** need

PASSAGE 33

(Economist)

1) One of the most important tasks of the professional economist, whether in government or private sector employment, is to be able to forecast future economic phenomena. Many economic variables are heavily dependent upon the state of the economy. For example, forecasts of economic growth are widely used by economists for all sorts of reasons related to economic policy and business well-being. The longer the time period the forecast covers, the greater the uncertainty involved. When the Bank of England, for instance, makes forecasts of inflation it produces fan charts to reflect this greater uncertainty.

Types of forecasts

- 2) Economists use various types of forecasting methods. The three main types are:
- statistical forecasts based on simple or sophisticated future extrapolation techniques
 - using models to produce a range of forecasts - this is particularly true of models of the economy involving complex interrelationships
 - forecasts based on intuition, experience or even guesswork, i.e., not involving statistical methods.

1 The word “intuition” in Paragraph (2) is closest in meaning to

- | | |
|--------------------|------------------|
| A interview | B feeling |
| C logic | D survey |

2 The word “phenomena” in Paragraph (1) is closest in meaning to

- | | |
|-------------------|-------------------|
| A problems | B benefits |
| C plans | D events |

3 The word “sophisticated” in Paragraph (2) is closest in meaning to

- | | |
|----------------------|-----------------------|
| A special | B classical |
| C complicated | D mathematical |

PASSAGE 34

Copyright History

- 1) Our written, recorded, and broadcast world is surrounded by warnings about copyright. If you look in the opening pages of most books, you will find a warning like this:
 “All rights reserved. No part of this book may be used or reproduced by any means, graphic, electronic, or mechanical, including photocopying, recording, taping, or by any information storage retrieval system without the written permission of the publisher except in the case of brief quotations embodied in critical articles and reviews”.
- 2) Even more familiar is the FBI warning at the start of most DVDs viewed by Americans today:
 “All rights reserved. These DVDs are authorized for sale or rent only in the country where originally sold (i. e., only in the U.S. or only in Canada, respectively). Unauthorized reproduction, distribution, or exhibition violates federal laws with severe penalties and violates Pictures Home Entertainment’s standard terms of trade”
- 3) These statements inform the viewer that they must respect “all rights”, may not use or reproduce the contents, or endure “severe penalties”. Just what are the “All rights” that are “reserved”? Can you reserve just any rights? Do you have any rights?
- 4) Copyright is a right given to authors and inventors in the Constitution. It is “the exclusive right to their respective writings and discoveries”. (Article 1, Section 8 Constitutional Convention, 1790). The “exclusive right” means that the author, and the author alone, has the right to publish and distribute his work. The same clause includes inventors and their inventions. Many authors will authorize a publisher to print and distribute their work. To do this they must transfer their rights to reproduce and to distribute to the publisher, normally for a limited period of time. Likewise, an inventor patents her work, then sells patent rights to industries ready to use it.
- 5) Since 1790, in different acts of Congress, music, photography, movies, computer software, graphic arts, and boat hull designs have all been granted copyright protection. Both legislation and court cases have led to the development of several “doctrines”, or common practices, about copyright.
- 6) A “fixed medium” is anything that can be returned to at a later time, which will display the same information or illustration as before. Paper, computer storage, stone or clay, paints, and a computerized piano keyboard’s recording system all are considered fixed mediums. No registration or special symbols are needed to gain copyright; it is present as soon as the somewhat original work is created.
- 7) The copyright owner has six basic rights: to make copies, to distribute those copies; to make derivative works; to perform or display the work in public; and to perform the work by means of a “digital audio transmission.” Any of these rights can be licensed to another person or a company such as a publisher.
- 8) Making copies refers to making any type of copy: a photocopy, a photograph, a hand-drawn copy that is indistinguishable or close to it; and computer copies of me any sort. These actions count as infringement even if it can be shown that no one has viewed the work.

1 What is a copyright?

- A the right given to authors and inventors for their writings and discoveries
- B the permission to sell or rent only in the country where originally sold
- C the transfer of rights to a publisher or an industry
- D the ability to accurately copy something

2 What do most Americans see at the start of DVDs?

- A an FBI warning
- B an ID number
- C a fixed medium
- D a mark of quality

3 How many basic rights does a copyright owner have?

- A 4
- B 6
- C 8
- D 10

PASSAGE 35

Vitamins and Minerals

- 1) Vitamins are organic compounds that the body needs in small amounts to function properly. Humans need 13 different vitamins, which have many roles in the body. For example, Vitamin A helps **maintain** good vision. Vitamin B helps form red blood cells. Vitamin K is needed for blood to clot when you have a cut or other wound.
- 2) Some vitamins are produced in the body. For example, Vitamin D is made in the skin when it is exposed to sunlight. Vitamins B and K are produced by bacteria that normally live inside the body. Most other vitamins must come from foods. Foods that are good sources of vitamins include whole grains, vegetables, fruits, and milk.
- 3) Not getting **sufficient** vitamins can cause health problems. For example, too little vitamin C causes a disease called scurvy. People with scurvy have bleeding gums, nosebleeds, and other symptoms.
- 4) Minerals are chemical elements that are needed for body processes. Minerals that you need in small amounts include iodine, iron, and zinc. Minerals have many important roles in the body. For example, calcium and phosphorus are needed for strong bones and teeth. Potassium and sodium are needed for muscles and nerves to work normally.
- 5) Your body cannot produce any of the minerals that it needs. Instead, you must get minerals from the foods you eat. Good sources of minerals include milk, leafy green vegetables, and whole grains. Not getting enough minerals can cause health problems. For example, too little calcium may cause osteoporosis. This is a disease in which bones become soft and break easily. Getting too much of some minerals can also cause health problems. Many people get too much sodium from packaged foods and adding table salt. Too much sodium causes high blood pressure in some people.

1 What is one negative effect of taking too much sodium?

- A high blood pressure
- B weak bones
- C bleeding
- D headache

2 Why is vitamin K needed in the body?

- A to help muscles work normally
- B to help cuts stop bleeding
- C to make red blood cells
- D to improve the health of the skin

3 The word "maintain" in Paragraph (1) is closest in meaning to

- A share
- B find
- C keep
- D improve

4 The word "sufficient" in Paragraph (3) is closest in meaning to

- A important
- B extra
- C enough
- D different

PASSAGE 36

Sleep Disorders

- 1) The idea that "everyone needs 8 hours of sleep" is untrue. Newborns spend nearly two-thirds of their day asleep, most adults no more than one-third. Age. Related differences in average time spent sleeping are rivaled by differences in the normal amount of sleep among individuals at any age. Some people thrive with fewer than 6 hours of sleep per night; others regularly sleep 9 hours or more. Sleep patterns may be genetically influenced. When two researchers, Wilse Webb and Scott Campbell, checked the pattern and duration of sleep among fraternal and identical twins, only the identical twins were strikingly similar.
- 2) Whatever their normal need for sleep, some 10 to 15 percent of adults complain of insomnia - persistent problems in falling or staying asleep. True insomnia is not the occasional inability to sleep that we experience when anxious or excited. For a stressed organism, alertness is natural and adaptive. Moreover, from middle age on, sleep is seldom uninterrupted. Occasional awakenings become the norm, not something to fret over or treat with medication.
- 3) Sometimes people fret unnecessarily about their sleep. Scientists have learned to doubt people's fretful sleep reports. In laboratory studies, insomnia complainers do get less sleep than others, but they typically overestimate, by about double, how long it took them to fall asleep, and they underestimate by nearly half how long they actually slept. Even if we've been awake only an hour or two, we may think we've had little sleep. because it's the waking part we remember. When researchers awaken people repeatedly during the night, some recall having slept soundly.

- 4) The most common quick fixes for true insomnia - sleeping pills - can aggravate the problem. Both reduce REM sleep and can leave a person with next-day blahs. With continued use, one needs bigger doses to get an effect, and when the drug is discontinued, the insomnia may worsen. Scientists are searching for natural chemicals that are abundant during sleep and might be synthesized as a sleep aid without side effects. In the meantime, sleep experts offer other natural alternatives:
- Relax before bedtime, using dimmer light.
 - Avoid caffeine (this includes chocolate) after late afternoon and avoid rich foods before bedtime. A glass of milk may help. (Milk provides raw materials for the manufacture of serotonin, a neurotransmitter that facilitates sleep.)
 - Sleep on a regular schedule (rise at the same time even after a restless night) and avoid naps. A regular sleep schedule boosts daytime alertness, too, as shown in a recent experiment in which University of Arizona students slept 7.5 hours a night on either a varying or consistent schedule
 - Exercise regularly but not in the late evening. (Late afternoon is best.)
 - Reassure yourself that the temporary loss of sleep causes no great harm, certainly nothing worth losing sleep over.
 - If nothing else works, aim for less sleep; go to bed later or get up earlier.
- 5) More rare but also more severe than insomnia are the sleep disorders narcolepsy and sleep apnea. People with narcolepsy (from narco, "numbness," and lepsy, "seizure") suffer periodic, overwhelming sleepiness. This usually lasts less than 5 minutes but sometimes occurs at the most inopportune times, perhaps just after taking a terrific swing at a softball or when laughing loudly or shouting angrily. In severe cases, the person may collapse directly into a brief period of REM sleep, with its accompanying loss of muscular tension. Those who suffer from narcolepsy - 1 in 2000 people, estimates the Stanford University Center for Narcolepsy - must live with extra caution.
- 6) The National Heart, Lung, and Blood Institute reports that 1 in 25 people (mostly overweight men) suffer from sleep apnea - a treatable disorder that was unknown before modern sleep research. They intermittently stop breathing during sleep. (Apnea means "stopping respiration") After an airless minute or so, decreased blood oxygen arouses the sleeper to awaken and snort in air for a few seconds. The process can repeat more than 400 times a night, depriving the person of slow-wave sleep. Apart from complaints of sleepiness and irritability during the day - and their friends' complaints about their loud "snoring"- apnea sufferers are often unaware of their disorder.

1 What percentage of adults have problems falling asleep?

- A 2-3 percent B 6-8 percent
C 10-15 percent D 20-25 percent

2 How many people suffer from narcolepsy?

- A 1 in 5 people B 1 in 25 people
C 1 in 400 people D 1 in 2000 people

3 Who did a study on sleep apnea?

- A The University of Arizona B The New York Center for Sleep Apnea
C The National Heart, Lung, and Blood Institute D The Stanford University Center for Narcolepsy

4 What did Wilse Webb and Scott Campbell study?

- A** different types of men
- B** different types of twins
- C** different types of adults
- D** different types of parents

5 Who usually experiences sleep apnea?

- A** fat men
- B** thin women
- C** normal adults
- D** identical twins

PASSAGE 37

Stages of Economic Activity

- 1) There are three main stages of economic activity, these stages are typical of nearly all production, and they are called the levels of economic — or business — activity.
- 2) Stage 1 is called the primary stage of production. This stage involves the earth's natural resources. Activities in the primary sector of industry include farming, fishing, forestry and the extraction of natural materials, such as oil and copper ore.
- 3) Stage 2 is called the secondary stage of production. This stage involves taking the materials and resources provided by the primary sector and converting them into manufactured or processed goods. Activities in the secondary sector of industry include building and construction, car manufacturing and computer assembly.
- 4) Stage 3 is called the tertiary stage of production. This stage involves providing services to both consumers and other businesses. Activities in the tertiary sector of industry include transport, banking, retail, insurance, hotels and hairdressing.
- 5) In some countries, primary industries such as mining employ many more people than manufacturing or service industries. These tend to be countries — often called developing countries — where manufacturing industry has only recently been established. As most people still live in the rural areas with low incomes, there is little demand for services such as transport, hotels and insurance. The levels of both employment and output in the primary sector in these countries are likely to be high. In countries which started up manufacturing industries many years ago, the secondary and tertiary sectors are likely to employ many more workers than the primary sector. The level of output in the primary sector is often small compared to the other two sectors.

1 What is the main topic of the passage?

- A** Production is the first stage.
- B** The level of output is highest in stage three.
- C** Employment is highest in stage two.
- D** Economic activity occurs in three stages.

2 Which stage of production are hotels an example of?

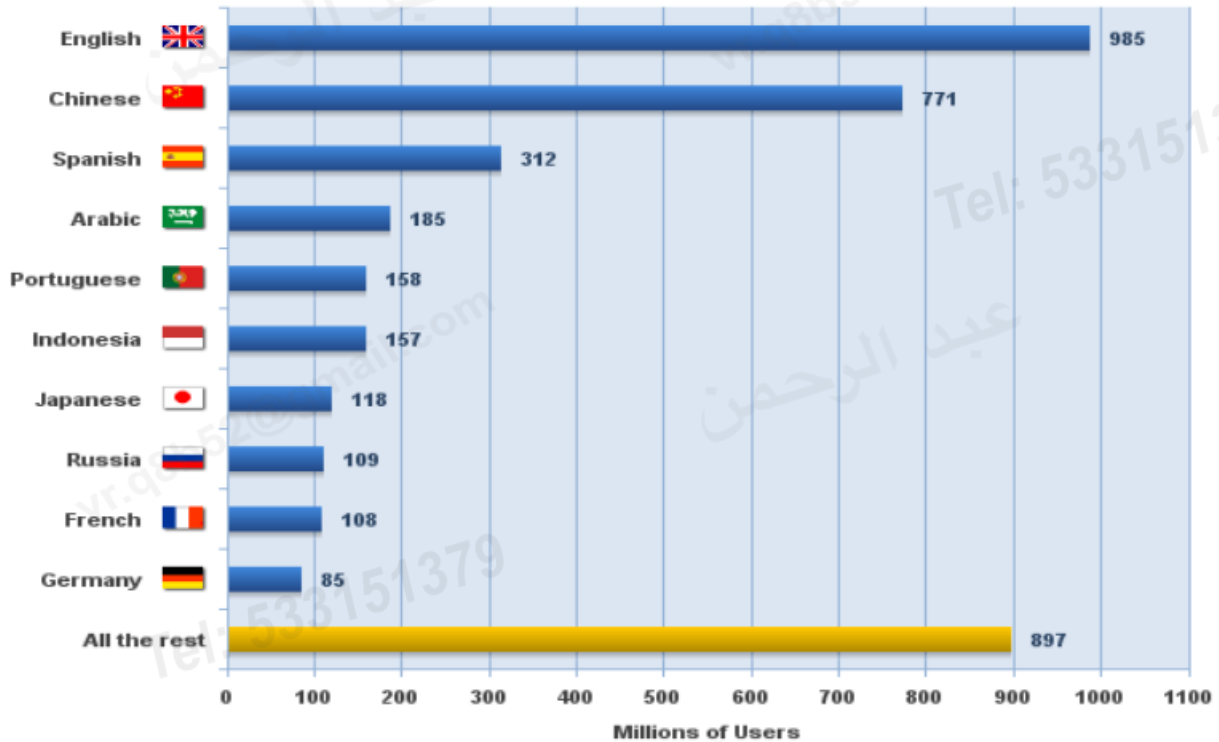
- A** Primary
- B** Secondary
- C** Tertiary
- D** Elementary

3 What is one important idea in Paragraph (3) related to the secondary stage of

- A Employment is high. B Services are performed.
C **New goods are made.** D It is the most important stage.

PASSAGE 38

Top Ten Languages in the Internet in Millions of users - June 2017



Source: Internet World Stats - www.internetworldstats.com/stats7.htm
Estimated total Internet users are 3,885,567,619 in June 30, 2017
Copyright © 2017, Miniwatts Marketing Group

1 How many people used the internet in Chinese in 2017?

- A 1277 million B 985 million
C **771 million** D 2017 million

2 In June 2017, how many users explored the internet in English?

- A 897 million B **985 million**
C 1,000 million D 3,886 million

PASSAGE 39

Automation

- 1) Knowing how and where robots and machines could impact the global economy will help financial executives in a competitive edge in their industries but predicting which countries are likely to be impacted most by workforce automation and when isn't as simple as comparing industries across the globe.
- 2) A recent McKinsey Global Institute report. A Future That Works: Automation, Employment, and Productivity, Analyzed the automation potential of 46 countries, representing 80% of the global workforce. Several factors are considered, including the percentage of work activities that could be automated using current technology, the number of full-time employees that could be affected and wages.
- 3) The types of activities that have a high potential for automation are physical tasks in highly structured and predictable environments, data processing and data collection. Those that have a considerably lower potential for automation are unpredictable physical work, interactions with others, applying expertise, and managing others, which is the least susceptible to automation.
- 4) Vast differences are expected in how automation will play out across the globe, as technical, economic, and social factors will determine the pace and extent of it. But it's hard to say how quickly automation will become reality, according to the report.
- 5) Take manufacturing, for example. One country may save a larger concentration of work hours in jobs that have higher automation potential, such as production and administrative support. And another country may have a higher proportion of work hours in jobs that are less likely to be automated, such as management and engineering.

1 What idea do the words "susceptible to automation" repeat?

- | | |
|-------------------------------|------------------------------|
| A workforce automation | B robots and machines |
| C automation potential | D competitive edge |

2 What can we understand from Paragraph (2) about the McKinsey Global Institute research?

- | | |
|--------------------------------------|---|
| A It was a large study. | B It was an automated study. |
| C It used current technology. | D It had an effect on full-time employees. |

3 Which of the following is an opinion in the passage?

- | |
|---|
| A The report considered several factors in the automation process. |
| B Automation of work will become a reality for all workers. |
| C The speed of change to automation is difficult to predict. |
| D The McKinsey report studied 46 different countries. |

4 Which of the following is a fact?

- A** Physical work can be unpredictable.
- B** The report considered information from 46 countries
- C** Technology has the greatest effect on full-time employees.
- D** The writers of the report interviewed 80% of the global workforce.

5 What idea do the words “administrative support” repeat?

- A** Management and engineering
- B** Data processing and data collection
- C** Technical, economic and social factors
- D** Applying expertise and managing others

6 What can we understand from Paragraphs (4) and (5) about automation around the world?

- A** It will be very difficult to achieve.
- B** It will become a reality very quickly.
- C** It will be different in different countries.
- D** It will have the biggest effect on manufacturing.

PASSAGE 40

Nanotechnology

- 1) Anybody who doesn't know much about nanotechnology should begin with geckos. These are the lizards that are probably the world's best climbers. Watching them climb upside down on a horizontal pane of glass, you realize that Spiderman should really have been called Geckoman. These guys out-climb spiders any day.
- 2) With perfect ease they can hang from a single toe, and they do so by pure adhesion, not by sticking a toe in a hole or by curling it round something they can grip. With all the toes on the glass, scientists guess that if the rest of the body were strong enough it could take the weight of a 100kg person suspended below it. Although each toe is equipped with a tiny hook-like claw at the end, these are of no use on the glass. What keeps them up there is the amazing structure of the skin of the toe.
- 3) Seen under the microscope, each toe has around two million tiny hairs on its underside. Under the higher magnification of an electron microscope the end of each of these hairs is seen to split into hundreds of even tinier nano-hairs, which scientists have called spatulae. These hairs are so small that they are able to establish contact with the molecular structure of the surface the gecko is walking on. With that near perfect contact the hairs are stuck to the surface by electromagnetic forces called Van der Waals forces. The molecules on the feet and on the surface have areas of slight positive or negative charge that attract each other like mini magnets when they get really close.
- 4) Scientists have been working for over 15 years now to try to unlock the secrets of the stickiness of gecko toes and find a way to artificially reproduce the same structure of nano-hairs. The hypothesis at the moment is that if any material can be shaped into nano-hairs they will have the same properties as those on gecko toes, so scientists are looking for a different material with which to make the stickiest synthetic surface ever.
- 5) This is one example of research in the field now known as nanotechnology. In this field, the technology being created can be measured in a few nanometers (one nanometer is a millionth of a millimeter). Interest in developing technology at this level was largely inspired by Richard Feynman at the beginning of the 1960s, but the 'nano' catchphrase was coined in the 1990s by Dr. Eric Drexler, who spurred scientists on through a series of speeches and a book with the title "Engines of Creation: The Coming Era of Nanotechnology".
- 6) The scientists working on the geckos see an enormously wide range of possible applications for the kind of adhesive nanotechnology that they will develop the one that will make the biggest splash in the media will be the gloves and the boots that will allow rock climbers to take their sport to hitherto undreamed-of heights. But the technology could also be used in surgery to keep the edges of wounds together without the need for stitches. There will also be a huge potential in the manufacturing sector to stick millions of components together tighter than ever before without glue or screws.

1 How many hairs does a gecko have at the bottom of each toe?

- A fifteen
- B hundreds
- C around two thousand
- D **around two million**

2 What are the forces that allow geckos to climb upside down on glass called?

- A **Van der Waals forces**
- B Sticking forces
- C Electric forces
- D Spatulae forces

3 Who started using the popular phrase “nano”?

- A Geckoman
- B **Eric Drexler**
- C Albert Einstein
- D Richard Feynman

PASSAGE 41

Software Ownership

(1) Most people know that software can be very expensive. However, many people do not know that even though you pay a lot for software, you do not necessarily own it. What happens, then, when you pay for a piece of software? Very few developers grant you actual ownership of a program, even after you ‘purchased it. Instead of buying the software itself, you are actually paying for a license that grants you permission to install and use the software.

Why a License?

Software developers have good reason for licensing software instead of selling it outright: Piracy - software piracy, which costs developers billions of dollars every year, is the act of copying software without the developer’s consent and without paying the developer and then selling or giving away the copies. If you install the program on multiple computers at the same time, that is piracy too. By licensing their products and maintaining some ownership of them, developers can take action against pirates.

Modifications - Most license agreements state that you cannot make modifications to a program’s source code. If developers allowed this, it would be an easy matter for others to make changes to a program and then try to claim the modified program as their own.

But even though the developer keeps most rights to a program, you have some rights, too. If the program does not perform as you expected, you have the right to return or exchange it.

1 Which of the following is the writer’s opinion?

- A **Software licensing benefits the software companies.**
- B Pirates copy billions of dollars of software every year.
- C Customers can usually make one backup copy of software.
- D Software licensing brings many advantages to the customer.

2 What can we understand from the passage about software piracy?

- A** It is a trivial problem for the software industry.
- B** It makes a lot of money for the software industry.
- C** It is a bigger issue in the USA than in other countries.
- D** It is the main reason software companies prefer licensing.

3 What can we understand from the passage about a lot of people who purchase software?

- A** They try to modify their software.
- B** They make many copies of their software.
- C** They like having a software license agreement.
- D** They fail to read their software license agreement

PASSAGE 42

Catalysts

Catalysts are very important in controlling the rate of reactions. A catalyst is a chemical that increases the speed or rate of a chemical reaction without **undergoing** permanent chemical change. Many industrial and biological processes need catalysts for efficiency; the reactions are too slow without them. Catalysts are fascinating chemicals. The reaction between hydrogen and nitrogen gas to form ammonia does not occur at a significant rate, even at high pressures and high temperatures. If some finely divided iron is added to the vessel; however, the rate of the reaction increases dramatically and the reaction becomes productive. Iron is not a reactant and does not chemically change in the reaction. The iron functions as a catalyst.

1 The word undergoing is closest in meaning to

- A** adding
- B** controlling
- C** preventing
- D** experiencing

PASSAGE 43

Ancient Birds

- 1) Giant birds of the past have names that speak for themselves. The Elephant bird, a native of Madagascar and the largest known giant bird, stood at over nine feet tall and weighed in at 1,000 pounds or more, until it went extinct about 1,000 years ago. Australia's Mthirung, nicknamed "Thunderbird," which disappeared nearly 50,000 years ago, is thought to have been nearly seven feet tall and weighed between 500 and 1,000 pounds. But until now, no one had ever found evidence of these towering avians in Europe.
- 2) Today, researchers describe the first fossil of a giant bird found in Crimea. Dated at around 1.8 million years old, the specimen makes experts question previous assumptions that giant birds were not part of the region's fauna during that period.
- 3) A team of paleontologists dug up the fossil – an unusually large femur bone – in Taurida Cave, located on the Crimean Peninsula in the northern Black Sea. The cave was only discovered last June when the construction of a new highway revealed its entrance.
- 4) Based on the femur's dimensions, the team calculated that the bird would have weighed around 992 pounds as much as an adult polar bear-making it the third largest bird ever recorded. Daniel Field, a scientist at the University of Cambridge, says, "It raises exciting questions about the factors that gave rise to these giant birds, and the factors that drove them to extinction".

1 What two phrases does the writer use to say that the birds were very large?

- A giant bird and towering avian**
- B elephant bird and native of Madagascar
- C large femur bone and the region's fauna
- D seven feet tall and nicknamed "Thunder bird"

2 Which of the following does the writer say is a fact?

- A The Thunderbird lived in Australia and Europe.
- B The femur is the largest bone in the body.
- C The Elephant bird was over nine feet tall.**
- D Researchers found a polar bear fossil.

3 How are researchers' views since the new discovery different from the views held before?

- A They now know what the birds ate.
- B They now know what the birds looked like.
- C They now know when the birds became extinct.
- D They now know a new place in which the birds lived.**

4 What can we understand about the giant bird of Crimea from Paragraph (3)?

- A Researchers found it at the bottom of the Black Sea.
- B Highway workers found it at a construction site.
- C Researchers did not find all the bones.**
- D We can see it in the Crimea Museum.

5 What can be understood about Daniel Field from paragraph (4)?

- A He studies fossil. B He found the fossil.
C He weighed the fossil. D He studies at Cambridge University.

PASSAGE 44

Engineering Innovation

- 1) Rome is known for many things: its military conquests, its civic architecture, temples, roads, emperors, and sculpture. Yet none of these would have been possible without the most vital resource of all: water. Now, as then, water is life, and without effective distribution, there would have been no great Roman civilization. Even until relatively modern times, Roman techniques to collect, store, and channel water over huge distances remain unsurpassed.
- 2) Such technology, was not, of course, invented from scratch by the Romans, and many earlier Mediterranean peoples had poured resources and expertise into managing water. On the island of Crete, the Minoans developed sophisticated rain harvesting and filtering systems as early as the middle of the third millennium B. C. Cretan water management techniques were later adopted across the Greek-speaking world, and examples abound of tunnels, drainage systems, and cisterns, sometimes of considerable size.
- 3) Yet although the water management tradition Rome inherited was rich and extensive, no previous system came close to the sophistication and reach of the Roman aqueduct. Striding across the landscape from Spain to Syria, these awe-inspiring structures not only carried life and livelihood but also proclaimed the greatness of Rome.
- 4) Aqueducts were costly public works, and not all Roman cities necessarily required them. Some cities, such as Pompeii, had their water needs met by wells or public and private cisterns dug beneath houses. Some cisterns could reach a colossal size, such as the Basilica Cistern (Yerebatan Sarnıcı) in Constantinople (now Istanbul, Turkey) and the Piscina Mirabilis in Miseno, Italy. The better built to provide drinking water to the populations such as Rome's—thought to have reached one million in the first century AD. needed an entire system of aqueducts not only for drinking water but also for supplying ornamental public fountains and baths.
- 5) Rome was supplied by aqueducts totaling 315 miles in length. Of that, 269 miles ran underground and 46 total miles above ground; however, only about 36 miles consisted of arched structures, just under 12 percent in all.

- 6) Rome had as many as 11 aqueduct systems, the most ancient of which was the milelong Aqua Appia, first operational in 312 B.C. It was named for its sponsor, the censor Appius Claudius Caecus, better known for another great pioneering structure of ancient Rome: the Appian Way, one of the first major Roman roads.
- 7) Three more aqueducts were built in the third and second centuries B.C.: Aqua Anio Vetus, Aqua Marcia, and Aqua Tepula. Aided by his son-in-law Marcus Vipsanius Agrippa, Emperor Augustus was particularly active in improving the capital's water supply, repairing old systems and building new ones. The Augustan-era Aqua Virgo named, according to legend, for the young girl who directed thirsty soldiers to the springs that fed it has been used uninterrupted ever since its construction. During his reign, Caligula began building two aqueducts that were finished by Emperor Claudius, the Aqua Claudia and Aqua Anio Novus. Trajan built the Aqua Traiana, which is 37 miles long, in A.D. 109.
- 8) The last of Rome's aqueducts was the Aqua Alexandrina, nearly 14 miles long, built by Alexander Severus in A.D. 226. Some have calculated that, once completed, Rome's aqueducts delivered roughly 1.5 million cubic yards of water per day—about 200 gallons per person. Its water network supplied 11 grand scale baths, as well as the 900 or so public baths, and almost 1,400 monumental fountains and private swimming pools. A crucial later stage in the conveying of water was, of course, its disposal. Rome's Cloaca Maxima sewer, which flowed into the Tiber River, became the model for urban sanitation.

1 Who developed rain harvesting in the third millennium B.C.?

- | | |
|------------------|--------------------|
| A Minoans | B Romans |
| C Greeks | D Egyptians |

2 How long were Rome's aqueducts in total?

- | | |
|--------------------|--------------------|
| A 269 miles | B 46 miles |
| C 315 miles | D 112 miles |

3 When did Trajan build the Aqua Traiana?

- | | |
|-------------------|-------------------|
| A A.D. 109 | B A.D. 226 |
| C 312 B.C. | D 37 B.C. |

PASSAGE 45

Cultural Norms

- 1) Humans are social creatures. People have always grouped together into communities in order to survive. Living together, people form common habits and behaviors—from specific methods of childrearing to preferred techniques for **obtaining** food. In modern day Paris, many people shop daily at outdoor markets to pick up what they need for their evening meal, buying cheese, meat, and vegetables from different specialty stalls. In the United States, the majority of people shop once a week at supermarkets, filling large carts to the brim. How would a Parisian perceive U.S. shopping behaviors that Americans take for granted?
- 2) Almost every human behavior, from shopping to marriage to expressions of feelings, is learned. In the United States, people tend to view marriage as a choice between two people, based on mutual feelings of love. In other nations and in other times, marriages have been arranged through an intricate process of interviews and **negotiations** between entire families.
- 3) To someone raised in New York City, the marriage customs of a family from Nigeria may seem strange, or even wrong. Conversely, someone from a traditional Kolkata family might be perplexed with the idea of romantic love as the foundation for lifelong commitment. In other words, the way in which people view marriage depends largely on what they have been taught.
- 4) Behavior based on learned customs is not a bad thing. Being familiar with unwritten rules helps people feel secure and “normal.” Most people want to live their daily lives confident that their behaviors will not be challenged or disrupted. But even an action as seemingly simple as commuting to work evidences a great deal of cultural propriety.

1 What has the greatest effect on people’s ideas about marriage today?

- A their ideas about romantic love
- B what they have seen in popular films
- C the marriage customs of people in New York
- D **what they have learned from their own community**

2 What is the main reason people have always lived in social groups?

- A friendship
- B marriage
- C customs
- D **survival**

3 The word “obtaining” in Paragraph (1) is closest in meaning to

- A **getting**
- B ordering
- C preparing
- D producing

4 The word “negotiations” in Paragraph (2) is closest in meaning to

- A differences
- B **discussions**
- C emergencies
- D relationships

PASSAGE 46

- 1) Our food is primarily made of carbohydrates, proteins, fats, minerals, vitamins and water. We need to regularly ingest food to sustain ourselves.
- 2) Living things do not follow the pattern of decay seen in the rest of the natural world. Unlike non-living things (such as rocks), living things maintain themselves. They build new cells, tissues and organs in the process of development. Once mature, organisms can sustain existing biological structures by cellular division. This process, also called mitosis, allows cells to use molecules such as water, amino acids (building blocks of proteins), carbohydrates and lipids to create new cells. This process requires the transfer of energy among chemical bonds.
- 3) Our cells are regularly being replaced and recycled and this requires a regular influx of energy and matter. We obtain energy in the form of food calories: new matter in the form of the molecules contained in our food. Not all of these molecules are digestible by all animals. These unneeded molecules may be eaten along with more desirable molecules. This is part of the reason why animals must have an opening in their digestive system
- 4) A balanced diet for humans includes several servings of breads, cereals, fruits and vegetables every day. Also essential are smaller servings of milk, dairy, meat and eggs. Fats, oils and sweets should make up a very small portion of a balanced diet.
- 5) Human beings eat several hundred pounds of food a year. From this food we obtain all the molecules we need so our bodies can operate, grow and replace the cells lost to wear, old age, or damage.
- 6) Animals, such as humans, have evolved intricate strategies of intercellular communication. Feedback, feed-forward, and inhibition allow us to maintain steady-state, or homeostasis. We get hungry because we want to eat. This seemingly simple cause and effect is the result of the empty stomach secreting the peptide hormone ghrelin into the bloodstream. When this hormone is received by the hypothalamus, it stimulates the release of growth hormones, which makes us want to eat. After eating to satiation, the release of the peptide hormone leptin causes the hypothalamus to inhibit hunger sensations. Leptin is released by a variety of tissues including adipose (fat cells), stomach, bone, pituitary, and the liver.

Metabolism

- 7) The word metabolism comes from the Greek root "change" and involves the building up or breaking down of molecules to be used by the body. These molecules will be used for cell growth, fuel and other processes. If the process involves breaking down molecules into simpler ones, usually to release energy, it is called catabolic. If building up complex molecules, for structures or energy storage, it is called anabolic.
- 8) Developed and less active bodies do not need as many energy calories as developing and active bodies. Developing bodies are adding cells at a rapid rate, and this requires an infusion of both new material (molecules) and energy. Active bodies, likewise, need more calories to sustain the energetic demands of more motion.

Proteins

9) Proteins are molecules made of nitrogen, carbon, oxygen and hydrogen and sometimes sulfur. These molecules are found in animal tissue such as meat (including fish), eggs, cheese and legumes, and many other plant foods.

10) Proteins are large molecules assembled from smaller units called amino acids and serve many important roles in living things. Amino acids are linked by covalent bonds called peptide bonds. Proteins can serve as enzymes, hormones as well as the building blocks of complex physical features. Proteins comprise teeth, bone, muscle, tendon, cartilage, skin - most of what makes up an organism.

11) As enzymes, proteins facilitate chemical reactions that would not otherwise happen in the short time, or lower temperatures required by living things. As hormones (such as the previously mentioned appetite inhibitor leptin) they are protein messengers that deliver information around the body.

Carbohydrates

12) Carbohydrates are made of hydrogen, oxygen, and carbon that combine to form monosaccharides. These simple sugars are made of five (pentose) or six (hexose) carbon rings. Additional hydrogen and oxygen atoms allow these rings to form disaccharides ("two sugars") such as sucrose and lactose or polysaccharides ("many sugars") such as starch.

13) Sugars are essential to living things. They provide a way to store chemical energy to operate living things. They are also the structural backbone to the information storage molecules DNA and RNA, as well as many of the other essential molecules in living things. Sugar is transported through the bloodstream in the form of the simple sugar glucose. They have 4 calories of energy per gram.

1 What two things happen to the cells in our body?

- A** They divide and are digested.
- B** They are replaced and recycled.
- C** They are replaced and digested.
- D** They build new cells and give energy.

2 What two things do cells use for mitosis

- A** water and dairy
- B** lipids and cereals
- C** amino acids and lipids
- D** amino acids and vegetables

3 What two hormones make people feel hunger?

- A** Ghrelin and growth hormones.
- B** Leptin and ghrelin.
- C** Ghrelin and peptide.
- D** Hypothalamus and growth hormones.

PASSAGE 47

Renewable Energy Sources

Passage A

Solar Energy

- 1) The energy falling on the Earth from the Sun is mostly in the form of light and the light that falls in one hour equals the total energy used by the world in a year. Unfortunately, its low energy density requires large collecting devices and its availability varies. Its greatest potential use is as an energy source for low-temperature water heating. This uses solar panels as the energy transfer devices, which convert light into heat energy. They are used increasingly to produce domestic hot water at about 70°C and to heat swimming pools.
- 2) Solar energy can also be used to produce high temperature heating, up to 3000°C or so, if a large curved mirror (a solar furnace) focuses the Sun's rays on to a small area. The energy can then be used to turn water to steam for driving the turbine of an electric generator in a power station.
- 3) Solar cells, made from semiconducting materials, convert sunlight into electricity directly. A number of cells connected together can be used to supply electricity to homes and to the electronic equipment in communication and other satellites. They are also used for small-scale power generation in remote areas of developing countries where there is no electricity supply. Recent developments have made large-scale generation more cost effective and there is now a large solar power plant in California. There are many designs for prototype light vehicles run on solar power.

Wind energy

- 4) Giant windmills called wind turbines with two or three blades each up to 30m long drive electrical generators. "Wind farms" of 20 to 100 turbines spaced about 400m apart, supply about 400MW (enough electricity for 250,000 homes) in the UK and provide a useful "top up" to the National Grid. Wind turbines can be noisy and may be considered unsightly so there is some environmental objection to wind farms, especially as the best sites are often in coastal or upland areas of great natural beauty.

Passage B

Wave energy

- 5) The rise and fall of sea waves have to be transferred by some kind of wave-energy converter into the rotary motion required to drive a generator. It is a difficult problem and the large-scale production of electricity by this means is unlikely in the near future, but small systems are being developed to supply island communities with power.

Tidal and hydroelectric energy

- 6) The flow of water from a higher to a lower level from behind a tidal barrage (barrier) or the dam of a hydroelectric scheme is used to drive a water turbine (water wheel) connected to a generator.
- 7) One of the largest working tidal schemes is the La Grande I project in Canada. Feasibility studies have shown that a 10-mile-long barrage across the River Severn Estuary could produce about 7% of today's electrical energy consumption in England and Wales. Such schemes have significant implications for the environment, as they may destroy wildlife habitats of water birds for example, and also for shipping routes.
- 8) In the UK, hydroelectric power stations generate about 2% of the electricity supply. Most are located in Scotland and Wales where the average rainfall is higher than in other areas. With good management hydroelectric energy is a reliable energy source, but there are risks connected with the construction of dams, and a variety of problems may result from the impact of a dam on the environment. Land previously used for forestry or farming may have to be flooded.

1 According to both passages, why is it difficult to use energy from renewable sources?

- A Renewable sources require large amounts of energy to generate power.
- B The availability of renewable energy differs and can only be used for water heating.
- C Large collecting devices are required and it's difficult to get permission from governments.
- D It's difficult to convert motion to drive a generator and crude oil prices are so cheap that it's not worth it.

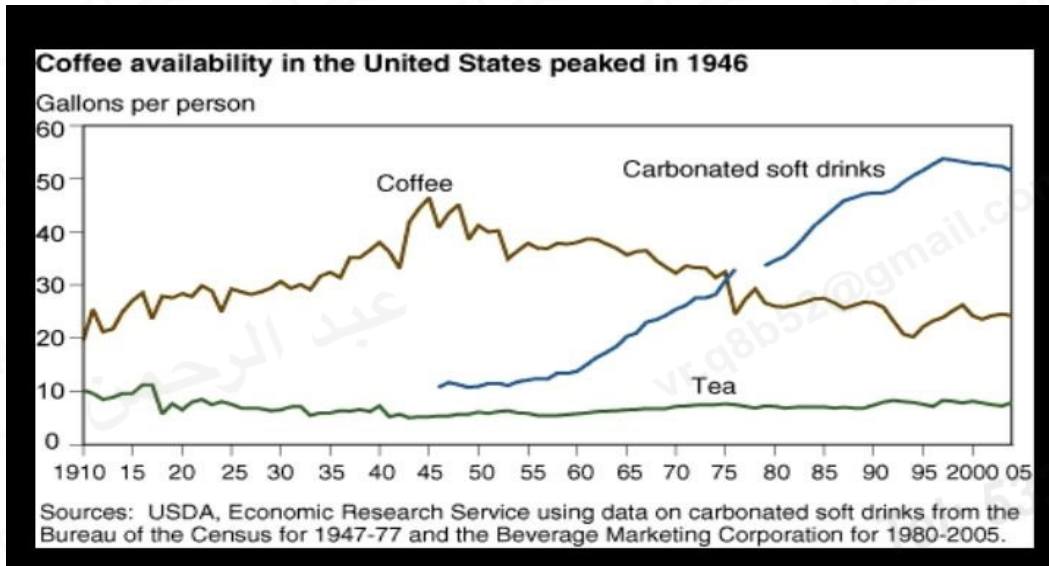
2 What do the passages say about the UK

- A Wind turbines are unpopular in the UK, but they provide 400 MW of energy.
- B The UK has up to 100 wind turbines that can provide energy to other countries.
- C Wind turbines supply electricity to some homes and hydroelectricity powers 2 percent of homes in the UK.
- D Hydroelectricity powers 2 percent of homes and wind power could provide power for another 10 percent of homes.

3 Which of the following statements best summarizes renewable energy from both passages?

- A The UK is the leading country in the world using alternative energy sources.
- B Renewable energy sources make up a small portion of the energy supply.
- C Wind turbines cause too much environmental damage to be used widely.
- D Canada is the leading country in hydroelectric energy.

PASSAGE 48



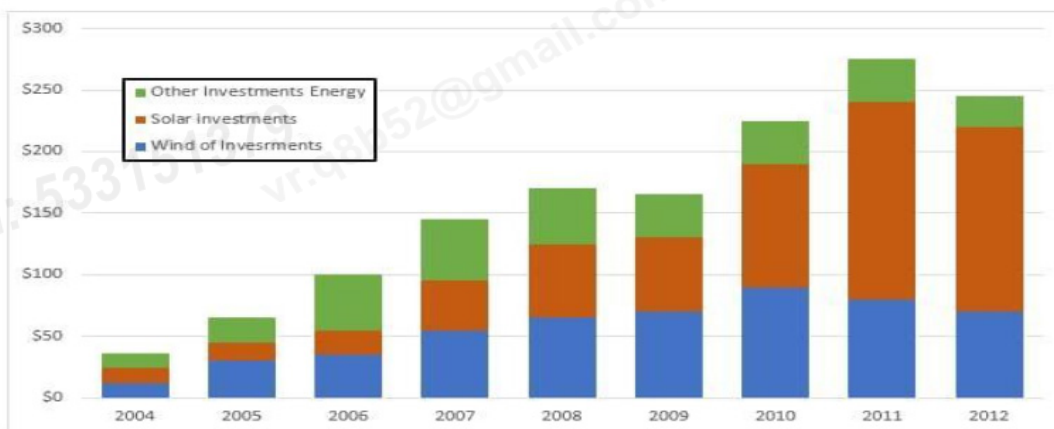
1 According to the graph, how many gallons of coffee did people drink in 1950?

- A around 50
B **around 40**
C around 30
D around 20

2 According to the graph, in what year was coffee drinking the lowest in the U.S?

- A 1945
B 1960
C **1995**
D 2000

PASSAGE 49



1 Which year represents the highest wind investment?

- A 2002
B 2004
C **2010**
D 2012

2 Which year represents the lowest solar investment?

- A **2004**
B 2006
C 2011
D 2015

PASSAGE 50

Emotions

- 1) What comes to mind when you think of emotions? It's probably happiness, sadness, or fear. Emotions such as happiness, anger, sadness, and fear are important emotions, but human emotional experience is vast which means that people are capable of experiencing a wide variety of feelings.
- 2) Let's consider what emotions do and when emotions happen. According to functionalist theories of emotion, emotions help people manage important tasks. Fear, for example, prepares the body to fight or flee; happiness rewards achieving goals and builds attachments to other people, but what causes emotions to happen in the first place? Although it usually feels like something in the world causes an emotion, such as a good hug, emotion theories argue that emotions most likely come from how we think about what is happening in the world, not what is really happening. After all, if things in the world directly caused emotions, everyone would always have the same emotion in response to something. Interest, for example, may motivate a person to learn something new, whereas it may not create a response in someone else.
- 3) For instance, appraisal theories propose that each emotion is caused by a group of appraisals, which are evaluations and judgments of what events in the world mean for our goals and well-being. We ask ourselves, is this relevant to me? Does it further or obstruct my goals? Can I deal with it or do something about it? Did someone do it on purpose? Different emotions come from different answers to these appraisal questions.
- 4) In general, emotions play important roles in everyday challenges such as responding to threats and building relationships. But emotions also help in other, more intellectual challenges for humans. Compared with other animals, we are born with little knowledge but have the potential for enormous intelligence. Emotions such as surprise, interest, and confusion first signal that something out of the ordinary has happened that deserves our attention. They then motivate us to engage with the new things that strain our understanding of the world and how it works. Emotions surely help us to fight or flee, but I believe that more importantly, they aid in learning, exploring, and reflecting.

1 What can we understand from Paragraph (2) about a good hug?

- A It is likely the result of the two people involved feeling happy.
- B Scientists argue it works as a reward for achieving a goal.
- C It may cause different feelings in different people.
- D Theories disagree over its emotional value.

2 How are functionalist theories of emotions different from appraisal theories

- A According to functionalist theories, emotions come from how we judge what happens in the world.
- B According to functionalist theories, emotions help us build relationships or respond to threats.
- C According to functionalist theories, events in the world cause emotions.
- D According to functionalist theories, emotional intelligence is more important than logical intelligence.

3 What idea does the word “relationships” in Paragraph (4) repeat?

- A** human emotional experience
- B** evaluations and judgments
- C** **attachments to other people**
- D** more intellectual challenges

4 Which of the following is the writer’s opinion?

- A** People experience many emotions.
- B** People know very little at birth.
- C** Happiness and sadness are emotions.
- D** **Emotions help us learn, explore, and reflect.**

5 What can we understand from the passage about emotions?

- A** Emotions may sometimes prevent us from achieving our goals.
- B** **Emotions make us want to know more about the world around us.**
- C** Scientists have decided there are seven basic types of emotions.
- D** The latest research has changed the way we now think about emotions

PASSAGE 51

Passage A: Environmental Causes of Obesity

- 1) Genetic factors are the forces inside you that cause you to gain weight and stay overweight. On the other hand, environmental factors are the outside forces that contribute to these problems. They include anything in our environment that makes us more likely to eat too much or exercise too little. Taken together, experts think that environmental factors are the driving force for the causes of obesity and its dramatic rise.
- 2) Environmental influences come into play very early in life, even before we are born. Researchers believe that the environment surrounding babies before they are born determines how they will develop later on in life. For example, babies of mothers who smoked during pregnancy are more likely to become overweight or develop a disease than those whose mothers did not smoke.
- 3) Childhood habits often stick with people for the rest of their lives. Kids who drink sodas and other drinks that contain sugar and eat high calorie foods develop a taste for these products and continue eating them as adults, these behaviors tend to promote weight gain. Similarly, kids who watch television and play video games instead of being active may be programming themselves for a sedentary future, which involves sitting down a lot rather than moving around.
- 4) In short, today’s environment promotes obesity by encouraging us to eat more and exercise less. There is also growing evidence that broader aspects of the way we live such as how much we sleep, our stress levels, and other psychological factors can affect weight as well.

Passage B: The Food Factor in Obesity

- 1) Today, Americans are eating more calories on average than they did in the 1970s. Experts believe that what is driving this trend is a combination of the increased availability and bigger portions of higher calorie foods.
- 2) Food is readily available practically everywhere we go -shopping centers, sports stadiums, movie theaters. Today more Americans are eating outside the home. For example, in 1970. Americans spent 27% of their food budget on food they are outside the home; by 2006, that percentage had risen to 46%.
- 3) In the 1950s, fast-food restaurants offered one portion size. Today, portion sizes have suddenly increased, a trend that has spread in many other types of food, from cookies to sandwiches. For example, a single "supersized" meal may contain 1,500- 2000 calories, which are equal to all the calories that most people need for an entire day.
- 4) This is important because research shows that people will often eat what is in front of them, even if they are already full. We are also eating more high calorie foods (especially salty snacks, soft drinks, and pizza), which are much more readily available than lower calorie choices, like salads and whole fruits. Research also shows that what children eat when they are younger will affect what they will eat as they grow older. Children who eat fast-food are likely to continue to eat this type A of food later on life, which would cause them many health problems. Doctors are now encouraging parents to help their children to develop healthy eating habits from a younger age in order to avoid any future health complications.

1 What can we understand from passages A and B about children's eating habits?

- A** They are less healthy than they were in the past.
- B** They affect their eating habits as adults.
- C** They are linked to levels of activity.
- D** They usually improve as they get older.

2 What do passages A and B say about the cause of obesity?

- A** Bad eating habits cause obesity.
- B** Lack of exercise causes obesity.
- C** Stress factors cause obesity.
- D** Genetics cause obesity.

3 What can we understand from passages A and B about soft drinks?

- A** They are more available than healthy drinks.
- B** Children drink them less than in the past.
- C** Children should avoid drinking them.
- D** They have increased in popularity over time.

4 What do passages A and B say about today's environment?

- A** People exercise less.
- B** People are healthier.
- C** People eat a lot more.
- D** People have more stress.

PASSAGE 52

Alchemy

1) The branch of science now called chemistry was in medieval times called alchemy. Alchemists believed that any substance could be transformed into any other substance, and many of them tried unsuccessfully to turn ordinary metals into gold. With the advances of the Scientific Revolution, the experiments of alchemists were **abandoned**. However, some of their practices - especially the manipulation of metals and acids – set the stage for modern chemistry.

1 The word **abandoned** in the passage is closest in meaning to

A begun

B **stopped**

C increased

D continued

PASSAGE 53

Team Rubicon: Working for a not-for-profit organization.

- 1) Not-for-profit organizations contribute to a large part of economic activity in the United States. They are clearly very powerful in the business world, even though their focus on goals other than profit falls outside the traditional model of a for-profit business. But it is this move away from a focus on profit that allows them to follow their aims of social improvement and contribute to society as a whole. To be truly useful in a not-for profit organization, a person must share the organization's vision.
- 2) The vision for Team Rubicon was created by its founders, Jake Wood and William McNulty, who saw the devastation, caused by the Haiti earthquake in 2010 and immediately took action. Both former soldiers, Wood and McNulty knew they could do something to help in this terrible situation. Within 24 hours, they had found the help of six other former soldiers, collected money, food and medicines from friends and family, and made their way to Haiti to help, and Team Rubicon was born.
- 3) The organization gets its name from the Rubicon, a river in northern Italy that Julius Caesar and his army crossed on their historical march to Rome, with the river showing the point of no return. The name mirrors the founders' experiences during the Haitian disaster, where despite advice from the government and other aid organizations not to go ahead, their small team crossed into Haiti from the Dominican Republic carrying essential equipment and medicines to thousands of earthquake victims.
- 4) Seven years later, Team Rubicon has two main aims: to pair the skills and experiences of former soldiers with emergency workers to be ready for any type of disaster and to provide a sense of community and achievement to former soldiers who have served their country but may be experiencing problems as a result of their war experiences.

- 5) According to the organization's mission statement, Team Rubicon aims to provide former soldiers with three things that they sometimes lose after leaving the army: a purpose, gained through disaster relief, a sense of community, built by working with others; and a feeling of self-worth from recognizing the positive effect one individual can make when helping others.
- 6) With its head office in the Los Angeles area. Team Rubicon has more than 60 employees who work in 10 regions around the country, along with more than 40.000 volunteers who are ready to move into action within 24 hours. Similar to company operations in for-profit organizations, staff positions at Team Rubicon include local administrators; field operations (including membership and training); marketing, communications, and social media; fundraising and partnership development, finance and accounting, and people operations.
- 7) Team Rubicon's staff members bring professional and/or military experience to their daily jobs. but they all Share the organization's vision. Many staff members started as volunteers for Team Rubicon while working in for-profit careers, while other took advantage of the organization's strong training program to become familiar with its aims.
- 8) In 2016 Team Rubicon trained 8000 former soldiers and emergency workers in disaster relief and responded to 46 disasters, which required more than 85000 volunteer hours. In addition to donations from individuals. Companies and other organizations. Team Rubicon relies on its partnerships with companies, such as Southwest Airlines, which provides hundreds of free plane tickets each year to fly volunteers to disaster sites.
- 9) Team Rubicon engages its nationwide community at every level of the organization, from volunteer to board member, and every step of its operation: from training to planning to implementation to looking for and finding donations and volunteers to help with any type of disaster relief. Over the past several years. Team Rubicon has been recognized as one of the top non- profits to work for by The Non-Profit Times, based on employee surveys and business partners' opinions about the organization's work environment.

1 In 2016, how many disasters did Rubicon respond?

- | | |
|-------------|-------------|
| A 10 | B 24 |
| C 46 | D 60 |

2 Where is Rubicon's head office?

- | | |
|-----------------------------|----------------------|
| A Dominican Republic | B New York |
| C Haiti | D Los Angeles |

3 From what country did Team Rubicon cross into Haiti?

- | | |
|-----------------------------|------------------------|
| A Dominican Republic | B United States |
| C Cuba | D Italy |

PASSAGE 54

European Heat Wave

- 1) Another deadly heat wave has arrived in Europe this week. Record temperatures went over 378 degrees Celsius (100 degrees Fahrenheit) in parts of France, (Germany, Poland and Spain, with hotter days to come. The same thing happened in 2018 when record-breaking heat was responsible for 700 deaths in Sweden and more than 250 in Denmark, countries that have never needed air conditioning before this new era of extreme climate change events.
- 2) Europe's five hottest summers in the past 500 years have all occurred in the last 15 years, not including this summer. All have been deadly. The 2003 heat wave was the worst, having led to the deaths of over 70,000 people; in 2010, 56,000 people died in Russia alone.
- 3) These extreme heat events are all connected to a slower jet stream that locks weather systems into place. Studies have linked the slowdown in the jet stream-the band of high-altitude winds that sweep around the globe from west to east to last summer's unprecedented droughts, heat waves, wildfires, and flooding events across the entire Northern Hemisphere. This is also likely to be behind India's weak monsoon rains and the widespread flooding in certain areas of the U.S. this year.
- 4) The loss of sea ice in the Arctic is increasing temperatures in the northern regions of our planet, and that is disrupting the natural jet stream patterns. Jet stream winds are driven by the temperature difference between the icy air of the arctic and hot air from the tropics. A rapidly warming arctic-this past winter it saw its lowest ever ice cover-reduces that temperature difference and slows the jet stream.
- 5) Like a slow-moving river, a slower jet stream forms deep curves and turns, which can slow down during the summer. sometimes for weeks. Weather patterns are also delayed with them, whether they are heat waves or expected rains.
- 6) Temperatures in Europe are nowhere near as hot as India's current month-long heat wave, where temperatures on the Asian subcontinent reached 51°C (123° F). Most Europeans, particularly in the north. are unused to anything over 29°C (85° F). Air conditioning also remains rare in Europe. It is found in less than five percent of homes in France. For example, and less than two percent of German homes. As a result, the struggles of temperatures reaching 40°C in June will seriously test the abilities of Europeans to deal with the hotter years ahead.
- 7) The number of heat wave days in European cities are nearly double those of the surrounding suburban and rural landscape because of the urban heat island effect. Concrete and asphalt absorb heat during the day and release it at night, which keeps urban areas hotter. Without major cuts in carbon emissions, which are released into the air when we burn fossil fuels, scientists argue that the number of heat wave days in cities are likely to increase 10 times by the end of this century.

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- 8) European governments and citizens are debating what to do about the increasing heat. Some would argue that people should just buy air conditioners to keep their homes cool. However, air conditioning increases energy use, which will in turn increase carbon emissions across European countries. Both governments and citizens are wary of increasing carbon emissions because it would lock them in a cycle that would increase the negative effects of climate change. Now these European countries face a dilemma. Although the majority of citizens in Europe want more government action to reduce carbon emissions, as the temperatures continue to increase, the demand for air conditioning units will also continue to rise.
- 9) Europe learned valuable lessons from the 2003 heat wave, which killed more than 70,000 people across the continent. Governments have taken several actions to ensure that death tolls would be more limited during this heat wave. For example, Paris, which experienced many deaths in 2003, is much better prepared this time around. Government officials have emergency services in place and there has been a strong campaign to raise awareness of the dangers of the heat wave around the city. Some schools in France have also closed since most of them do not have air conditioners. The local governments have also set up cooling areas and temporary water fountains in busy city areas.
- 10) Paris has relatively little green space and has been working for years on how to "green up" and introduce more plants in order to counter the heat held by stone and concrete. Paris officials also plan to keep 13 large parks open all night during the anticipated heat wave because the temperature there would be one or two degrees lower than in the rest of the city. There are also plans to keep public swimming pools open later to encourage people to swim at night in order to cool down from the heat. In Paris, older cars have also been banned from use in the city to reduce the city's air pollution. Which increases during a heat wave.

1 What two things are needed to have jet stream winds?

- A Monsoon rains and icy arctic air
- B Hot air from the tropics and the summer
- C Icy arctic air and hot air from the tropics**
- D Monsoon rains and hot air from the tropics

2 What two things could increase heat waves in European cities?

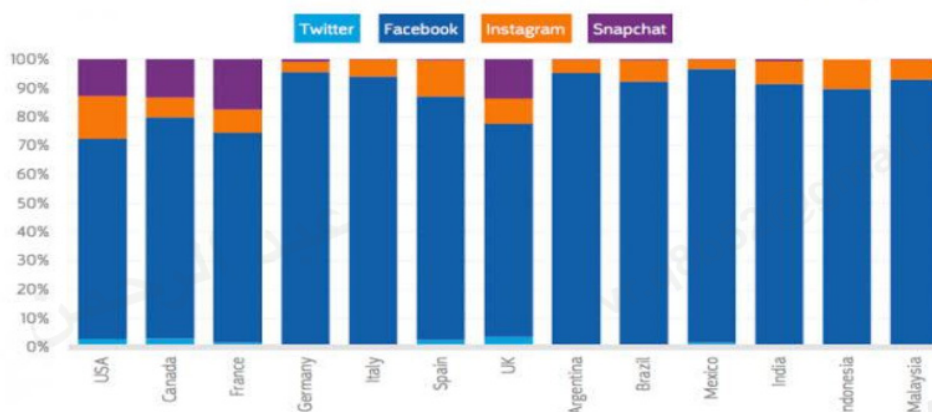
- A Wildfires and pollution
- B Drought and low usage of air conditioning
- C Widespread flooding and carbon emissions
- D The urban heat island effect and more usage of air conditioning**

3 What are two ways Paris is fighting the heat wave?

- A Banning older cars in the city and using more air conditioning.
- B Reducing carbon emissions and using plants to make more green space.
- C Keeping public swimming pools open later and reducing carbon emissions.
- D Using plants to make more green space and keeping public parks open all night.**

PASSAGE 55

Social Networks' Share of Time Share of Combined Minutes for 4 Major Social Networking Apps



1 What percentage of social media minutes did Indians spend using Snapchat?

- A 100% B 20%
C 2% D 0%

PASSAGE 56

Aggression in Children

- Most parents do not enjoy watching their children misbehave. Bad behavior by children often results in bad behavior by parents. The first idea that has to go is that poor parenting is what makes children misbehave or behave badly. The cause of the child's behavior may lie in psychological problems; it may even lie in the biology of the child. Whatever the reason, the important issue is how parents respond when children act out.
- Aggressive behavior starts early in children's lives. A study looked at children 6 to 24 months of age. Mothers reported how often their children acted out, or displayed poor behavior. They cited kicking, hitting, pulling hair, biting and even hurting animals. The most common actions were hitting or smacking another person. The least common action was hurting animals. Hitting someone peaked at 18 months when eight of 10 kids were hitting and smacking other people. Kicking, pushing and throwing things peaked at 20 months. The "terrible twos" started before the age two. Pediatricians can assure parents that these behaviors are normal in small children. The big job is to guide parents on how to deal with their children when they behave this way. From the start, parents should set limits. They need to respond in ways that may help redirect or distract a child. This would help a child go from misbehaving to a more positive behavior. Pediatricians believe these approaches work. It seems certain that positive responses such as these are better than anger or punishment.
- The frequency, intensity, and length of the bad behavior are also important. There are some questions that parents must also consider. Does the child have any issues that he or she is dealing with? Does the child have friends? Some children may show signs of depression when they have had a negative experience. The answers to these questions may explain why the child is acting out.
- Parents often use their instincts in dealing with their children without considering what is causing the misbehavior. They may respond with anger, threats. And punishment. A better way is to plan in order to avoid potential conflicts. For example, if getting ready for school is a problem, parents can come up with ways to make it easier. This would help them to avoid potential problems before they start.

1 What word other than “misbehave” does the writer use for aggressive behavior?

- A act out**
- B avoid**
- C distract**
- D deal with**

2 Which of the following is a fact?

- A Poor parenting is the cause of children’s misbehavior.**
- B Aggressive behavior is normal in young children.**
- C Parents often deal with children’s bad behavior well.**
- D Hunting animals is the most common aggressive behavior among children.**

3 How is the writer’s view about children’s bad behavior different from the parents’ view?

- A The writer believes that parents should plan to avoid bad behavior.**
- B The writer believes that parents should use their instincts to deal with bad behavior**
- C The writer believes that parents should respond to bad behavior with threats and punishment.**
- D The writer believes that parents should ignore bad behavior**

4 What can we understand about parents from Paragraph (3)?

- A Parents understand that children’s bad behavior is normal.**
- B Parents avoid being angry with or yelling at children.**
- C Parents reward bad behavior.**
- D Parents fail to deal with children’s bad behavior appropriately.**

5 What can we understand about parents in Paragraph (5)?

- A Parents fail to prevent children’s bad behavior.**
- B Parents blame their children’s friends for bad behavior.**
- C Parents consider the causes of children’s bad behavior.**
- D Parents think schools should deal with children’s bad behavior**

PASSAGE 57

Passage A: Human Anatomy

- 1) Human Anatomy is the scientific study of the body's structures. It is significant so we know how the structure or organs are supposed to work correctly. Some of those structures are very small and can only be observed and analyzed with this assistance of a microscope. Other larger structures can readily be seen manipulated, measured, and weighed the word "anatomy" comes from a Greek root cut means "to cut apart." Human anatomy was first studied by observing the exterior of the body and observing the wounds of soldiers and other injuries. Later, physicians were allowed to dissect, or cut open. bodies of the dead to increase their knowledge.
- 2) When a body is dissected, its structures are cut apart in order to observe their physical attributes and their relationships to one another. Dissection is still used in medical schools, anatomy courses, and in pathology labs. In order to observe structures in living people. however, a number of imaging techniques have been developed. These techniques allow clinicians to see structures inside the living body such as a cancer or a fractured bone.
- 3) Like most scientific disciplines, anatomy has areas of specialization. Gross anatomy is the study of die larger structures of the body, those visible without the aid of magnification. Macro- means "large, thus: gross anatomy is also referred to as macroscopic anatomy. In contrast, micro- means "small" and microscopic anatomy is the study of structures that can be observed only with the use of a microscope or other magnification devices.

Passage B: Human Physiology

- 1) Whereas anatomy is about structure, physiology is about function. Human physiology is the scientific study of the chemistry and physics of the structures of the body and the ways in which they work together to support the functions of life. It began in France over 200 years ago with a scientist named Claude Bernard. Much of the study of physiology centers on the body's tendency toward homeostasis. Homeostasis is the state of steady internal conditions maintained by living things. The study of physiology certainly includes observation, both with the naked eye and with microscopes, as well as manipulations and measurements. However, current advances in physiology usually depend on carefully designed laboratory experiments that reveal the functions of the many structures and chemical compounds that make up the human body and establish the foundation upon which we build our knowledge of how to treat disease.
- 2) Like anatomists, physiologists typically specialize in a particular branch of physiology. For example, neurophysiology is the study of tic brain, spinal cord. And nerves and how this work together to perform functions as complex and diverse as vision, movement, and thinking. Physiologists may work from the organ level (exploring, for example, what different parts of the brain do) to the molecular level (such as exploring how an electrochemical signal travel along nerves).
- 3) Form is closely related to function in all living things. For example, the thin flap of your eyelid can snap down to clear away dust particles and almost instantaneously slide back up to allow you to see again. At the microscopic level, the arrangement and function of the nerves and muscles that serve the eyelid allow for its quick action and retreat.

1 Which of the following best summarize anatomy and physiology from passages A and B?

- A Anatomy involves, cutting open bodies while physiology uses lab experiments.**
- B Anatomy is helpful for soldiers, while physiology is helpful for everyone.
- C The both involve the study of neurophysiology.
- D They both rely on cutting open bodies.

2 What can be understood from the passage about the early period of anatomy and physiology?

- A Anatomy and physiology; both began 200 years ago.
- B Physiology began in France while anatomy began in Greece.
- C Physiology began over 200 years ago while anatomy began with observing wounded soldiers.**
- D Anatomy was developed by Andreas Vesalius while Physiology was developed by Claude Bernard.

3 According to Passages A and B, it is important to know about anatomy and physiology

- A to be able to treat disease
- B to be able to see cancer and find a cue
- C to know how organs work and to treat disease**
- D to become a physiologist and a successful doctor

4 What do Passages A and B say about the study of anatomy and physiology?

- A Both mean to 'cut apart'.
- B Both involve the use of microscopes.**
- C Both are about the body's structures.
- D both are taught at medical schools and high schools.

PASSAGE 58

"When the well's dry, we know the worth of water."

1 The passage is closest in meaning to

- A Nothing lasts forever, but we DON'T normally think about that.
- B We DON'T know how valuable something is until it is NOT available.**
- C It is a good idea to start a business storing water for the future.
- D Water is especially important in desert areas.

PASSAGE 59

Advertising

- 1) Whenever people give information to the public about an event, a product, or a service, they are using advertising. A piece of advertising is called an advertisement, or ad. Ads appear almost everywhere. They are found in newspapers and magazines. They appear on television, radio, and the Internet. Ads are also posted as signs in all kinds of public places.
- 2) The goal of most advertising is to make the public want to buy whatever is being advertised. People also use advertising to make the public form opinions about things. For example, an ad could try to make the public believe that a company treats its workers well.
- 3) When advertisers want many people to see or hear their ads, they pay the media to have the ads published or broadcast. Newspapers and magazines publish or print ads between their articles. Television and radio network broadcast, or play ads during their programs. Television and radio ads are also called commercials. Web sites, buses, movie theaters, and many other places also display ads in exchange for money.
- 4) Signs were the first form of advertising. Even thousands of years ago people created hand-lettered signs to advertise their goods and services. The invention of the printing press in the 1400s expanded this type of advertising. Merchants could print dozens of the same posters and fliers to advertise what they were selling. In the 1600s and 1700s newspapers appeared in Europe. The Americas and Japan. Advertising then became even more widespread.

1 What is one important idea related to advertisements that the writer mentions in Paragraph (2)?

- | | |
|-------------------------------------|-------------------------------------|
| A that they are everywhere | B that they affect our views |
| C that they give information | D that they help businesses |

2 What is one important idea related to advertisements that the writer mentions in Paragraph (1)?

- A** that they existed thousands of years ago
- B** that they make us want to buy things
- C** that they may change our views
- D** that they are found in all places

3 What does the writer want to show when he mentions that an ad could make us believe that company treats its workers well?

- | | |
|--|---|
| A that ads can benefit businesses | B that ads can convince us to buy |
| C that ads can shape our opinions | D that ads can give us information |

4 What is the main topic of the passage?

- | | |
|-------------------------------------|--|
| A the goal of advertising | B the harms of advertising |
| C the history of advertising | D the importance of advertising |

PASSAGE 60

California Strawberries

- 1) Agricultural abundance is a pillar of the California dream. In 2016 the state turned out more than \$45 billion worth of meat, milk and crops. Long before nutritionists agreed that fresh fruits and vegetables should be the center of American diets, California farmers had planted much of their land in these products, and today they produce half of the nation's fruits, vegetables and nuts.
- 2) But although fruits and vegetables are vaunted as healthy foods, their impact as crops is quite different. On many California produce farms wages are low, working conditions are poor and farmers use enormous quantities of pesticides and precious water. This is the central contradiction of California agriculture
- 3) California's strawberry industry is the state's sixth most important commodity in terms of the value of crops sold. Strawberries are attractive reasonably nutritious and occasionally tasty fruits and can be grown and eaten within California nearly year-round. But the industry's growth has relied on heavy use of toxic chemicals and now growers face heightened restrictions on some of their most favored chemicals: soil fumigants.
- 4) Unfortunately, less toxic or non-chemical strategies that would allow strawberries to be grown for a mass market, maintaining affordable prices, are elusive and likely to remain so.
- 5) Agricultural abundance is a pillar of the California dream. In 2016 the state turned out more than \$45 billion worth of meat, milk and crops. Long before nutritionists agreed that fresh fruits and vegetables should be the center of American diets, California farmers had planted much of their land in these products, and today they produce half of the nation's fruits, vegetables and nuts. Although strawberry production once was scattered throughout the state, by the 1960s, it had concentrated in coastal zones to take advantage of sandy soils and mild temperatures. Thereafter, the industry saw tremendous growth in productivity. In Monterey and Santa Cruz counties alone, acreage more than tripled and production increased tenfold from 1960 to 2014. Much of this growth was enabled by advances in plant breeding and use of plastic tarps to absorb heat, allowing growers to increase the length of strawberry seasons.
- 6) But the main driver of growth has been the use of pre plant chemical fumigants. Growers hire pest control companies to fumigate soils before planting strawberries in order to kill soil-borne pests most importantly, plant pathogens such as *Verticillium dahliae* and *Macrophomina phaseolina*. Without such treatment, these pathogens cause strawberry plants to wilt and die.
- 7) Now, however, the industry's fumigant of choice methyl bromide can no longer be used in strawberry fruit production. In 1991 methyl bromide was banned under the Montreal Protocol on Substances that used in nursery production to ensure that starter plants are virus- and pathogen-free. One potential replacement, methyl iodide, was approved for use in late 2010. But it was withdrawn from the market in 2012, following an activist campaign and lawsuit that accused California regulators of performing an inadequate review of potential health risks to workers and the general public. Among other things, the chemical is a known neurotoxin and carcinogen.
- 8) Other fumigants are still allowed, but their use is increasingly restricted by buffer zones and township quotas. Consequently, growers are contending with heightened levels of plant disease, some from pathogens that had never before been evident in California strawberry fields.
- 9) Can California find a less toxic way to raise 90 percent of the nation's fresh strawberries? Although the strawberry industry is investing significant resources into non-chemical alternatives to manage soil-borne disease, the obstacles are formidable. The entire production system, including reliance on fumigants, is embedded into the cost of land.

- 10) Fumigation has allowed growers to plant on the same blocks of land. year after year, and not worry about soil disease. With fumigation available to control.
- 11) Together these innovations have allowed growers to keep prime strawberry land in production every year for much of the year, yielding exceptional amounts of fruit. High land prices reflect these expectations and make it unprofitable to grow strawberries using less intensive methods. The Pacific Ocean's natural summer air-conditioning is attractive to suburbanites as well as strawberries, so coastal development is putting additional pressure on the cost of strawberry land while at the same time increasing public pressure to control use of fumigants.
- 12) Informed and concerned consumers ingrained with California's deep culture of environmentalism have turned to organic strawberries, which they see as a more sustainable option. As conventional growers took note of this vibrant market, organic strawberry production rose fivefold between 2000 and 2012, to reach about 3,300 acres planted in 2017, which represents 12 percent of all strawberry acreage.
- 13) But although organic growers use non-chemical soil fumigation methods or rotate strawberries with crops that have a mild disease-suppressing effect, such as broccoli, few of them fundamentally alter the production system in other ways.
- 14) A small but dedicated set of growers have learned how to raise strawberries for the long haul without fumigants. However, even they use starter plants produced on fumigated soil, since no nurseries produce organic plants. Crucially, for these growers strawberries are a minor crop in what are otherwise highly diversified systems. And most of these producers are located outside of prime strawberry growing regions, where land is cheaper. Their approach therefore is not nearly replicable for growers producing for the mass market.
- 15) These exceptions tell us as much about the limits of California strawberry production as does mainstream production. Consumers who want organic strawberries must be willing to live with compromises, pay premium prices. For others, the dream of affordable year-round strawberries grown without toxic chemicals is already an impossible one.

1 What are two plant pathogens that harm strawberries?

- A verticillium dahliae and macrophomina phaseolina**
- B methyl bromide and methyl iodide
- C methyl iodide and macrophomina phaseolina
- D verticillium dahliae and methyl bromide

2 Between which years did organic strawberry production rise by fivefold?

- A 1960 and 2014
- B 2005 and 2015
- C 2010 and 2012
- D 2000 and 2012**

PASSAGE 61

The Cold War

The US response to the End of the Cold War

- 1) When Mikhail Gorbachev became the leader of the Soviet Union (USSR) in 1985, no one predicted that the end of Cold War was only six years away
- 2) It all began in Poland in June 1989. A non-communist party did well in the general election and people were celebrating in the streets. Everyone expected Gorbachev to send the army in, but he did nothing at all. European communist governments under the Soviet influence started to fall one by one. In autumn 1989, East Germans were knocking down the Berlin Wall. Then communist governments fell in Hungary, Czechoslovakia and in Romania the people put the president in prison.
- 3) Demands for freedom soon spread to the Soviet Union and Estonia, Latvia, and Lithuania announced their freedom from Soviet control. In December 1991. Russia itself followed these three and declared independence. The USSR was finished. Gorbachev was a president without a country.
- 4) Americans were shocked but pleased at these changes. Republicans were quick to argue that it was their actions that won the Cold War. They believed their spending policies during the 1980s and 1990s forced the Soviets to spend too much money on expensive equipment and weapons for its army. However, Professor Parker of Harvard University argues that it was a joint effort, started 25 years earlier by the Democrats when Harry Truman was president.
- 5) Other history professors pointed out that no one really won the Cold War. The United States spent enormous amounts of money building up their army for a war with the Soviet Union. This war never came. However, thousands of American lives were lost in unnecessary wars in Korea and Vietnam
- 6) Most Americans found it difficult to get used to the idea of no Cold War. Since 1945, Americans were born into a Cold War culture. They were used to thinking about the Soviet Union as a dangerous enemy with a large Army and nuclear weapons. Now the enemy was beaten, but the world remained dangerous. In many ways, facing one large enemy was simpler than the current situation where danger is unknown and comes from many small terrorist groups.

1 What idea do the words declared independence repeat?

- | | |
|--------------------------------------|---|
| A did nothing at all | B announced their freedom |
| C put the president in prison | D did well in the general election |

2 Which one of the following is an opinion?

- | | |
|---|---|
| A The world remains a dangerous place. | B USA spent a lot of money on weapons. |
| C Many Americans died in Vietnam. | D Nobody won the Cold War. |

3 How are Parker's ideas about the end of the Cold War different from the Republicans'?

- | |
|--|
| A He thinks that only the Republicans' policies were important |
| B He thinks that only the Democrats' policies were important |
| C He thinks Gorbachev's and the Republicans' policies were important. |
| D He thinks that the Democrats' and the Republicans' policies were important. |

4 What can we understand from the passage about Mikhail Gorbachev?

- A He could speak several languages.
- B He was the Soviet Union's last president.
- C He wanted Poland to become independent.
- D He had several meetings with Harry Truman

5 What can we understand from the passage about the Soviet Union?

- A Its people were rich and lived well.
- B It fought a war with America in Vietnam.
- C It spent a lot of money on nuclear weapons.
- D It was the most powerful country in the world.

PASSAGE 62

Stress

- 1) We generally use the word "stress" when we feel that everything seems to have become too much. We are **overloaded** and wonder whether we really can cope with the demands placed upon us. Anything that poses a challenge or a threat to our well-being is a stress at all; many say our lives would be boring and would probably feel pointless. However, when the stresses affect both our mental and physical health, they are bad.
- 2) The way we respond to a challenge may also be a type of stress. Part of our response to a challenge is physiological and affects our physical state. When faced with a challenge or a threat, our body activates resources to protect us; to either get away as fast as we can. Or fight. This is known as our 'fight-or-flight' response.
- 3) If you are upstairs at home and an earthquake starts, the faster you can get yourself, and anyone else who might be at home, out the more likely you are all to survive. If you need to save somebody's life during that earthquake by lifting a heavy weight that has fallen on them. You will need parts of your body to be activated to give you more strength.
- 4) To do this, our body produces larger quantities of the chemicals cortisol, adrenaline and noradrenaline, which trigger it to have a higher heart rate. Heightened muscle preparedness, sweating, and alertness. All these factors help us protect ourselves in a dangerous or challenging situation.
- 5) Non-essential body functions slow down, such as our digestive and immune systems when we are in a 'fight-or-flight' situation. All resources can then be concentrated on rapid breathing, blood flow, alertness and muscle use.
- 6) Most of us have varying interpretations of what stress is about and what matters, sort of us focus on what happens to us, such as breaking a bone or getting a promotion. While others think more about the event itself. In my opinion. What really matters are our thoughts about the situations in which we find ourselves.

1 The word "overloaded" in paragraph (1), is closest in meaning to.....

- A Feeling NOT listened to
- B Feeling NOT supported
- C Feeling under pressure
- D Feeling overweight

2 What does the expression 'fight or flight response' used in paragraph (2) mean?

- A** Staying in a dangerous situation or facing it
- B** Getting away from a dangerous situation very quickly
- C** The ways a dangerous situation changes with stress
- D** The ways a person's body reacts to a dangerous situation

3 According to Paragraph (3), what is the best advice in the event of an earthquake?

- A** Try to save someone else's life as well as your own
- B** Make sure that no heavy weight has fallen on top of you.
- C** Try to get out of the building as quickly as possible.
- D** Stay inside and wait until the earthquake has finished

4 The word "it" in paragraph (4) refers to

- A** body
- B** cortisol
- C** adrenaline
- D** noradrenaline

5 According to paragraph (5), what is TRUE about a 'fight or flight' situation?

- A** All body functions are considered essential.
- B** All body functions are considered NON essential.
- C** The digestive and immune systems are considered NON essential.
- D** The digestive and immune systems are considered essential

6 Why does the author use the pronoun "we" throughout the passage?

- A** Because he is describing the experience of someone else.
- B** Because he distances himself from the experience he describes.
- C** Because he is describing an experience unique to himself.
- D** Because he believes that his feeling will be shared by many others.

PASSAGE 63

Pizza

- 1) Pizza, which originated in Italy. Is a fast food that is known and loved all around the world. How did it become so popular? Part of the reason is that tourists who went to Italy ate it there and loved it. When they returned to their countries, they looked for Italian restaurants that might have it. But much more significant in pizza becoming popular worldwide that fact that lots of American soldiers who were in Italy during World War II ate it there and then wanted it when they returned to the USA. This dramatic increase in the demand for pizza in the 1950s led to the development of special restaurants for pizza.
- 2) A shaky pizza parlor opened in California in 1954 which led to the first pizza restaurant chain that spread throughout the USA and even to other countries. Soon after that, in 1958, Two young men opened a Pizza Hut in Kanas. Now there are Pizza Huts all over the world. Other Pizza restaurants chains soon developed. For example. Domino's Pizza can be found all over the world. Papa John's Pizza has also become quite popular. This ever-growing demand for pizza led to a market for ready-to-bake frozen pizzas in supermarkets. Now pizzas can easily be enjoyed not only in restaurants. But also, at home and even in school and hospital cafeterias.
- 3) Pizza is a kind of dish that can adapt well in different societies. The ingredients for pizza can change to fit the taste and desires of a particular culture. The key reason enabling it to gain worldwide popularity. Vegetarians – there are many in India and other countries – can simply ask for vegetables only on a pizza. Beef, Pork, Lamb, or goat – the choice of meat differs from country to country – can be used. Those who like spicy food can add their favorite spices. Dessert pizzas are readily available with or without fruit. Seafood? No problem. Add to this variety of ingredients the different styles of pizza: deep dish, thin crust, stuffed crust, and the result is a dish that is adaptable to everyone's taste.
- 4) While pizza is not exactly a health food since it tends to be high in calories. It can in fact contain a decent amount of vitamins and minerals due to the wide range of possible ingredients. Pizza can therefore be nutritious. All of these factors help explain the worldwide popularity of pizza.

1 The word "there" in paragraph (1) refers to.....

- | | |
|----------------------------|-----------------------------|
| A the United States | B a pizza restaurant |
| C Italy | D the world |

2 According to paragraph (2), the first pizza parlor opened in

- | | |
|-----------------------------|-------------------------|
| A 1954 in California | B 1954 in Kansas |
| C 1958 in California | D 1958 in Kansas |

3 According to paragraph (2), supermarkets began to offer frozen pizzas because they.....

- | | |
|---|--|
| A are healthier than other pizzas | B contain a variety of ingredients |
| C wanted to compete with restaurants | D wanted to meet the increased demand |

4 According to paragraph (3), the main reason for pizzas becoming popular worldwide is their ability to

- A Adapt to different cultures
- B Appeal to vegetarians
- C Have different crusts
- D NOT to spoil quickly

5 According to paragraph (4) Pizza can have a fair amount of vitamins and minerals because it has.....

- A A variety of ingredients
- B A lot of cheese
- C Crunchy crust
- D Different styles

6 According to paragraph (4), Pizza is NOT a good example of a health food because it is

- A low in fat
- B high in calories
- C short of carbohydrates
- D short of grains

7 What is the best title for the passage?

- A Pizza Hut
- B Preparing Pizza
- C The Popularity of Pizza
- D How Pizza Came to America

PASSAGE 64

- 1) In 2008, Mada'inSaleh was made a UNESCO World Heritage site. This means that it has become recognized as a place of historical and cultural importance in the world. It is the only one of Saudi Arabia's 4,000 archeological **sites** to be honored in this way.
- 2) Mada'inSaleh is located about 400 kilometers north-west of Medina. Its early history is well known by all Muslims. The Holy Quran tells us how its people were punished by Allah. The site had been settled by the tribe of Thamud. When prophet Saleh – Peace be upon him – warned them to stop their bad practices and to obey Allah. They refused to listen to him. They killed a sacred camel that was sent to them. Finally. He – peace be upon him- told the Thamud that if they did not change their ways and repent in three days. They would be destroyed. They disbelieved and paid no attention to his words. So he – peace be upon him – and the true believers left the city. The rest were all killed by terrible lightning and an earthquake.
- 3) The buildings and monuments that we can see today at Mada'inSaleh are from a later time and are remnants of the great Nabatean Kingdom. Other famous buildings of this civilization are found in northern Syria and in Petra in Jordan. Which was the Nabatean capital. The Nabateans also developed a system of agriculture by digging wells and storing water underground. At Mada'inSaleh. There are wonderful examples of their rock- cut tombs. The facades decorated with elaborately carved designs. The dry desert climate has helped to preserve the buildings and keep them in excellent condition.

1 According to paragraph (1), why is Mada'inSaleh important in Saudi Arabia and the world today?

- A It is a great historical and cultural site.
- B It is part of the Nabatean Kingdom.
- C It has caravan routes and trade.
- D It is located near Medina.

2 The word “sites” in Paragraph (1) is closet in meaning to

- A** Civilization
- B** **Places**
- C** Tribes
- D** Cultures

3 The pronoun Its in Paragraph (2) refers to

- A** Medina
- B** The Thamud
- C** **Mada'inSaleh**
- D** The Holy Quran

4 According to Paragraph (2), Prophet Saleh – peace be upon him – left Mada'inSaleh because he

- A** Wanted to warn the other people
- B** Did NOT want Medina to be destroyed
- C** Wanted to see the lightning and earthquake
- D** **Did NOT want the believers to be destroyed**

5 According to Paragraph (3), Petra.....

- A** Is a successful commercial city
- B** **Was the Nabatean capital**
- C** Was the capital of Jordan
- D** Is in northern Syria

6 Which of the following did the Nabteans NOT do?

- A** Carve decorations in Medina
- B** Make wells and store water
- C** **Build cities in Syria and Jordan**
- D** Build rock tombs and monuments

PASSAGE 65

How many fast food meals do you eat per week?

	Children 5-12	Young Adults 13-17	Adults 18-49	Elderly 50+	Total
0	8	2	4	9	23
1-3	24	4	26	31	85
4-6	10	28	14	6	58
7+	8	16	6	4	34

Which fast food restaurants have you visited in the last year?

	Children 5-12	Young Adults 13-17	Adults 18-49	Elderly 50+	Total
McDonalds	44	42	41	42	169
Burger King	36	41	32	28	137
Herfy	11	43	32	3	89
Hardees	9	46	25	10	90
KFC	24	36	43	42	145

1 Which fast food restaurant is most popular for adults?

- A Burger King B McDonalds
C Hardees D **KFC**

2 Which fast food restaurant is most popular?

- A **McDonalds** B Hardees
C Herfy D KFC

PASSAGE 66

The University administration made a questionnaire to find out about their services at the student Union. The professors were all told to ask their students to fill out the questionnaires and return them by the end of the semester.

1 Who should respond to the questionnaires?

- A NEITHER the students NOR the professors
B The students and the professors
C The professors
D **The students**

PASSAGE 67

Immigration to the United States

- 1) The United States experienced major waves of immigration during the colonial era, the first part of the 19th century and from the 1880s to 1920. Many immigrants came to America seeking greater economic opportunity, while some, such as the Pilgrims in the early 1600s, arrived in search of religious freedom. From the 17th to 19th centuries, hundreds of thousands of enslaved Africans came to America against their will. The first significant federal legislation restricting immigration was the 1882 Chinese Exclusion Act. Individual states regulated immigration prior to the 1892 opening of Ellis Island, the country's first federal immigration station. New laws in 1965 ended the quota system that favored European immigrants, and today, the majority of the country's immigrants hail from Asia and Latin America.
- 2) From its earliest days, America has been a nation of immigrants, starting with its original inhabitants, who crossed the land bridge connecting Asia and North America tens of thousands of years ago. By the 1500s, the first Europeans, led by the Spanish and French, had begun establishing settlements in what would become the United States. In 1607, the English founded their first permanent settlement in present-day America at Jamestown in the Virginia Colony.
- 3) Some of America's first settlers came in search of freedom to practice their faith. In 1620, a group of roughly 100 people later known as the Pilgrims fled religious persecution in Europe and arrived at present-day Plymouth, Massachusetts, where they established a colony. They were soon followed by a larger group seeking religious freedom, the Puritans, who established the Massachusetts Bay Colony. By some estimates, 20,000 Puritans migrated to the region between 1630 and 1640.
- 4) A larger share of immigrants came to America seeking economic opportunities. However, because the price of passage was steep, an estimated one-half or more of the white Europeans who made the voyage did so by becoming indentured servants. Although some people voluntarily indentured themselves, others were kidnapped in European cities and forced into servitude in America. Additionally, thousands of English convicts were shipped across the Atlantic as indentured servants.
- 5) Another group of immigrants who arrived against their will during the colonial period were enslaved people from West Africa. The earliest records of slavery in America include a group of approximately 20 Africans who were forced into indentured servitude in Jamestown, Virginia, in 1619. By 1680, there were some 7,000 Africans in the American colonies, a number that ballooned to 700,000 by 1790, according to some estimates. Congress outlawed the importation of enslaved people to the United States as of 1808, but the practice continued. The U.S. Civil War (1861- 1865) resulted in the emancipation of approximately 4 million enslaved people. Although the exact numbers will never be known, it is believed that 500,000 to 650,000 Africans were brought to America and sold into slavery between the 17th and 19th centuries.
- 6) Another major wave of immigration occurred from around 1815 to 1865. The majority of these newcomers hailed from Northern and Western Europe. Approximately one-third came from Ireland, which experienced a massive famine in the mid-19th century. In the 1840s, almost half of America's

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immigrants were from Ireland alone. Typically impoverished, these Irish immigrants settled near their point of arrival in cities along the East Coast. Between 1820 and 1930, some 45 million Irish migrated to the United States.

- 7) Also in the 19th century, the United States received some 5 million German immigrants. Many of them journeyed to the present-day Midwest to buy farms or congregated in such cities as Milwaukee, St. Louis and Cincinnati. In the national census of 2000, more Americans claimed German ancestry than any other group.
- 8) During the mid-1800s, a significant number of Asian immigrants settled in the United States. Lured by news of the California gold rush, some 25,000 Chinese had migrated there by the early 1850s.

1 When did the pilgrims come to America?

- | | |
|-------------------------------|----------------------------------|
| A in the early 1600s | B in the 19th century |
| C during the mid-1800s | D during the 20th century |

2 Why did many immigrants come to America?

- | | |
|---|---|
| A to find greater economic opportunity | B to continue their higher education |
| C to work as servants | D to search for gold |

3 How many Irish migrated to the United States between 1820 and 1930?

- | | |
|--------------------|----------------------|
| A 4 million | B 4.5 million |
| C 5 million | D 6 million |

PASSAGE 68

- 1) Most fabrics are created by weaving long threads together, a technique which has changed very little throughout history. Hand weaving is done on a frame or handloom, whereas mechanized weaving is done on a power loom. The main distinction between hand weaving and mechanized weaving is that the latter method allows huge quantities of good quality fabric to be produced very quickly, further allowing the speedy production of consumer items. While the exact shape or mechanism of any loom might differ, the basic **function** is always the same. On all looms, weaving is done by intersecting longitudinal threads, called the warp, with transverse threads, called the weft.
- 2) Often, handcrafted products like hand-woven rugs and hand-knitted sweaters are of better quality and much more expensive than machine-made ones. As it may be impractical for many of us to have every textile-based product we purchase be handmade, or to make them ourselves, knowing how much effort goes into creating textiles may at least help us better appreciate all the fabrics we use every day.

1 The word "function" in Paragraph (1) is closest in meaning to.....

- | | |
|------------------|-------------------|
| A part | B process |
| C routine | D relation |

2 According to Paragraph (2), how can people better appreciate fabrics?

- A** by knowing how much it costs to manufacture them.
- B** by knowing whether they are made by hand or by machine.
- C** by knowing how much effort is put into making them.
- D** by knowing how they are produced in large quantities.

PASSAGE 69

Yellowstone National Park

- 1) There were once many Wolves in Yellowstone National Park, but by 1926, humans had hunted them to extinction there. The absence of wolves affected many parts of the Yellowstone ecosystem.
- 2) Most significantly, the disappearance of wolves led to a huge increase in the number of elk (a type of deer). This in term had negative effects on plants and animals in the park. Park authorities tried to keep the elk population under control by hunting, but in the late 1960s and 1970s, the U.S government and the park managers began considering a new policy. They wanted to return to natural processes for regulating the balance of wildlife in the park.
- 3) In 1995, Congress authorized reintroducing the gray wolf to Yellowstone. The first wolves were brought in from Canada a year later. Almost immediately. Authorities noticed differences in the park. As a result of the reintroduction of wolves, the number of elk declined. This led to an unexpected change. The number of willow trees and aspen, which elk eat. increased. Beavers, which feed on willows, in tum grew more numerous. In addition, the populations of some songbird species and small mammals that live in aspen stands have since grown. Other animals and people have benefited, too. Scavengers, or animals that eat dead animals, have increased in number.

1 What is one important ides related to the disappearance of wolves that the writer mentions in Paragraph (2)?

- A** It had negative effects on the park ecosystem
- B** Wolves were found in Canada
- C** The authorities started hunting elks
- D** The park managers made a new policy.

2 What is one important idea related to the reintroduction of wolves that the writer mentions in Paragraph (3)?

- A** The number of songbird species has grown.
- B** Humans hunted too many wolves in 1926
- C** The park authorities tried hunting elk
- D** There were positive changes in the park.

3 What are scavengers an example of?

- A** animals that feed on willows
- B** animals that live in aspen stands
- C** animals that benefited from the return of wolves
- D** animals that were brought to the park from Canada

4 What is the main topic of the passage?

- A** The park visitors were happy with the return of wolves.
- B** The new policy by the US government saved the park.
- C** The return of wolves benefitted the park ecosystem.
- D** The return of wolves had bad effects on several animals in the park.

PASSAGE 70

Plastic waste

- 1) Plastic that are non-biodegradable are not broken down by decomposers when dumped in landfill sites or left as litter. This means that they remain in the environment, taking up valuable space or causing visual pollution. Moreover, discarded plastic bottles can trap small animals; nylon fishing lines and nets can trap birds and mammals such as seals and dolphins. As the plastic in water gradually deteriorate, they fragment into tiny pieces, which are eaten by fish and birds, making them ill as a result. When plastic is burned, it can release toxic gases.
- 2) Plastic bags are a big problem, taking up a lot of space in landfill sites. In 2002, the Republic of Ireland introduced a plastic bag fee, called a PlasTax, to try to control the problem. It had a dramatic effect, cutting the use of single-use bags from 12 billion to 230 million a year and reducing the litter problem that plastic bags create. Revenue raised from the fee is used to support environmental projects.
- 3) Since then, bans have spread rapidly. More than 400 laws across the United States ban or tax plastic bags, according to Jennie Romer, an attorney at the Surfrider Foundation and a leading advocate and expert on plastic bag policies. The bans actually started outside places like the United States and Ireland, with Bangladesh banning them countrywide in 2002 and Pakistan announcing recently that it, too, will ban single- use plastic bags. "Our slight change in habits will do miracles for future generations," one politician wrote.

1 What does Paragraph (1) say about plastic waste?

- A** Plastic is liked for its low cost and many uses.
- B** Plastic is good because it DOES NOT break down easily.
- C** By 2050, there will be more plastic than fish in the oceans.
- D** Plastic waste creates a lot of problems for the planet and its animals.

2 How did the government of Ireland reduce the use of single-use plastic shopping bags?

- A** They stopped the use of single-use shopping bags.
- B** They introduced a charge for single-use shopping bags.
- C** They allowed the use of paper bags that break down easier than plastic ones.

3 Why does the writer use the word “Moreover” in paragraph (1)?

- A** To give examples of the types of plastic pollution.
- B** To show that the animals are hurt as a result of pollution.
- C** To give more information about the problem of plastic pollution.
- D** To show that visual pollution is different from other kinds of pollution.

4 Why does the writer use the word “as a result” in Paragraph (1)?

- A** to let readers know the list of everything that happened.
- B** to give more information about the problem of plastic pollution.
- C** to show that the fish and birds got sick from eating the plastic pieces.
- D** to give examples of what happened to the plastic after breaking up into small pieces.

5 What does the writer think about the efforts to reduce plastic pollution?

- A** The writer believes the efforts are helpful.
- B** The writer believes the efforts are NOT doing much.
- C** The writer believes that more countries need to take action.
- D** The writer is NOT sure about the efforts as hundreds of millions of bags are still thrown out in Ireland.

PASSAGE 71

Detroit

- 1) city's population increased from about 300,000 in 1900 to 18 million in 1950 as the city attracted many workers to work in its car factories. In 1960, it had the highest income per person in the USA. Today, however, more than 40,000 buildings are vacant or not used and property prices have fallen by more than 80%
- 2) Between 1900 and 1950, Detroit had a growing economy. The American car companies, General Motors, Ford, and Chrysler were all located in Detroit and they manufactured the majority of the cars sold in the US. However, as international competition increased and American car sales decreased, many people lost their jobs in Detroit's car factories. The city had relied too much on one industry. As a result, when the car industry suffered, it also had a negative effect on Detroit's economy. Reduced car sales also meant that there would be less tax money from the city's car companies, which decreased the city's already low government budget.
- 3) Detroit's population also fell to just 700,000 in 2013 as many of the richer people moved away from the city. As the city's car industry became weaker, the number of jobs in the city decreased and unemployment reached 30% by 2013. Over 60% of Detroit's population who work now, do so outside the city. However, there is some hope. Urban farms are appearing in the city. Young people – especially artists and musicians – are moving into Detroit to make use of cheap city spaces. The city is also creating new policies, such as low rents and tax cuts, in order to help attract new businesses back into the city.

1 What did more car factories in Detroit lead to?

- | | |
|--|------------------------------------|
| A the best car companies in the world | B change in property prices |
| C a larger population | D creating a new city. |

2 What was the reason for low rents and tax cuts?

- | | |
|---|--|
| A to bring companies to Detroit | B to help artists and musicians |
| C to make life easier for the poor | D to create urban farms |

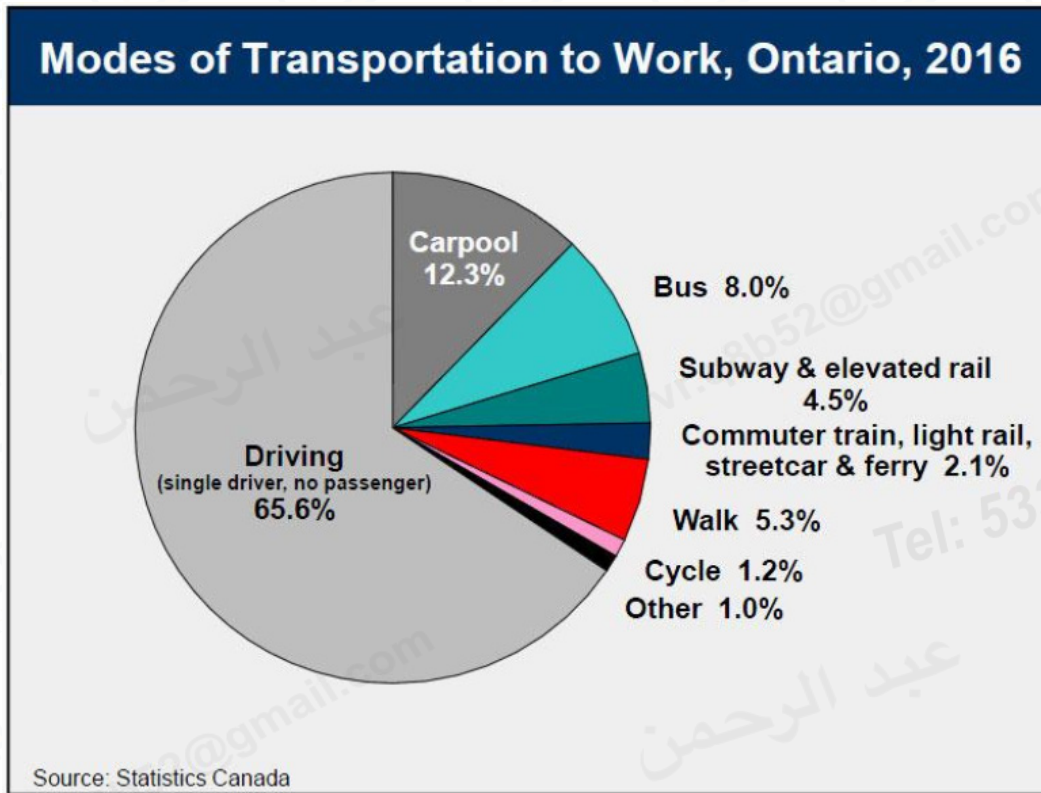
3 The "word" vacant in Paragraph (1) is closest in meaning to.....

- | | |
|--------------------|----------------------|
| A empty | B for sale |
| C destroyed | D being built |

4 The word "suffered" in Paragraph (2) is closest in meaning to.....

- | | |
|-------------------------|------------------------|
| A moved location | B faced trouble |
| C expanded | D changed |

PASSAGE 72



1 What percentage of people went to work by car?

- A 65.6 B 12.3
C 8 D 1

2 What percentage of people travelled by foot?

- A 1 B 1.2
C 4.5 D 5.3

PASSAGE 73

Toxic waste

- 1) The unwanted poisonous by-products of human activity, toxic wastes can arise from many sources. Atmospheric pollution, for example, is caused by automobiles, power plants, and incinerators. Acid rain is produced when oxides of sulfur, carbon, and nitrogen from burning fossil fuels combine with moisture in the air, producing hazardous acids. Discarded industrial solvents include low-molecular weight material such as benzene and carbon tetrachloride and high-molecular weight organic materials such as PCBs (polychlorinated biphenyls). which were used in the past for hydraulic fluids and in electrical transformers and capacitors. Dioxins are the wanted by-products of the manufacture of herbicides. Heavy-metal residues from copper or silver mining can contaminate groundwater or streams and lakes and become concentrated in fish. Radioactive wastes are generated by nuclear power reactors, the manufacture of nuclear weapons, and, at low levels, by the industrial and medical application of radioisotopes.
- 2) In 1981 approximately 264 million tons of waste were produced in the United States—about 55 million tons were considered hazardous. During 1986 the United States generated about 1,770,000 cubic feet (50,000 cubic meters) of low-level solid and liquid radioactive waste.
- 3) Many toxic wastes can harm humans, animals, or plants. Significant exposure to lead in paints and gasoline can lead to nervous disorders. Organic toxic wastes can lead to liver and kidney inflammation. Others, such as PCBs, are suspected of causing birth defects. Some organic materials, such as benzene, are known to cause cancer in laboratory animals and are listed as possible cancer-producing agents in humans. Moderately high levels of copper, silver, and other heavy metals are detrimental to the growth of algae.
- 4) Some toxic wastes cause ecological imbalances. The insecticide DDT (dichlorobiphenyl trichloroethane), for example, almost wiped out the American bald eagle population and reduced many other bird populations. It destroyed the birds' ability to develop a sufficiently strong egg shell to assure hatching. Because of DDT's threat to bird populations severe restrictions were imposed in 1972 on its use in the United States. Other laws required the reduction of lead in gasoline and the termination of PCB production. DDT is still used in developing countries for its effectiveness against the malaria-carrying mosquito.
- 5) Depending on the type of waste, toxic wastes can be treated chemically, biologically, or by combustion. (See also garbage and refuse disposal.) An acid spill, for example, may be treated with lime or bicarbonate to neutralize the acid. Oil spills at sea are often treated with an emulsifier to disperse the oil in the water, thereby reducing the adverse effects on beaches and on wildlife. Effective methods of biological treatment of toxic wastes are still undergoing development. Organisms that can survive the toxicity and degrade the toxic wastes in a reasonable amount of time have not been found, but advances in genetic engineering may change this situation.

- 6) Combustion and other high-temperature treatments are the major methods used to reduce the toxicity of wastes. Processes involving plasma technology are used for specific toxic wastes. These processes use high temperatures to ionize a mixture of air and fuel gases. When combined with these ionized gases, hot toxic gases from the waste are decomposed into relatively harmless components. Plasma treatment at temperatures above 1,650° F (900° C) can diminish the toxicity of gas emissions such as dioxin vapor by about ten times the reduction that results from conventional combustion treatments.
- 7) Incineration of liquid wastes is the primary method of toxic waste treatment in the United States. It usually involves injecting the waste as small droplets into a burner. A fixed-hearth process, by which both liquid and solid wastes can be handled, is also used. The waste is treated in two stages. It is first partially burned with insufficient air and then burned again with excess air at higher temperatures to destroy the gases released during the first stage.
- 8) Another widely used process involves incineration in a rotary kiln. This is used for solids, liquids, their mixtures (slurries), and wastes in containers. Some hazardous wastes are disposed of directly as fuel in industrial boilers or cement kilns.
- 9) Liquid toxic wastes must be stored temporarily before disposal. Steel drums are used for short-term storage. Materials less subject to corrosion, such as glass or ceramic, are often required for long-term storage. Ocean dumping and the use of landfills are no longer permitted for the disposal of hazardous waste in the United States.
- 10) In the United States high-level nuclear wastes containing plutonium or uranium are either sent to reprocessing plants or stored near the nuclear facility site until disposal. Vitrification, a disposal procedure developed in recent years, is a process that embeds nuclear wastes in glasslike substances that are stable for thousands of years. These erosion-resistant blocks are then stored in underground salt mines or stable rock formations. Vitrification has been highly developed in France where nuclear energy is used extensively for electricity production. In the United States low level radioactive wastes are currently stored at sites in three states—South Carolina, Nevada, and Washington—often after considerable volume reduction by compacting. Some low-level radioactive wastes are also incinerated. In the United States performance standards and permit requirements for thermal toxic waste destruction are determined by the Environmental Protection Agency (EPA). Current incinerator standards require the removal of at least 9999 percent of the principal organic hazardous constituents and 99 percent of the hydrogen chloride in exhaust gases. Separate standards apply to solid particles (dust and ash) emitted during incineration. Radioactive wastes are regulated by the EPA, the Department of Energy (DOE), and the Nuclear Regulatory Commission (NRC). Each state is responsible for its own waste and interstate cooperation regarding disposal facilities is encouraged. Toxic waste regulation in Canada is monitored by the Ministry of the Environment, while the Atomic Energy Control Board manages radioactive waste.

1 According to the passage, what are the heavy metals that affect the growth of algae?

- | | |
|-----------------------------|-------------------------------|
| A Copper and DDT | B Copper and silver |
| C Silver and benzene | D Gasoline and benzene |

2 What are three things needed for generating radioactive Wastes?

- A nuclear power reactors, the manufacture of nuclear weapons, and the application of radioisotopes.**
- B the application of radioisotopes, the manufacture of herbicides and nuclear power reactors.
- C the manufacture of nuclear weapons, acid rain and industrial boilers.
- D gas emissions, carbon tetrachloride and nuclear

3 What are three methods currently used for toxic waste treatment?

- A combustion, ocean dumping and vitrification
- B vitrification, landfills and biological treatment
- C vitrification, combustion and chemical treatment
- D combustion, biological treatment and vitrification**

PASSAGE 74

Controlling Inflation

Passage A

- 1) Inflation occurs when an economy grows due to increased spending. When this happens, prices rise and the currency within the economy is worth less than it was before; the currency essentially won't buy as much as it would before.
- 2) There are many methods used to control inflation; some work well while others may have damaging effects. For example, controlling inflation through wage and price controls can cause a recession and cause job losses.

Contractionary Monetary Policy

- 3) One popular method of controlling inflation is through a contractionary monetary policy. The goal of a contractionary policy is to reduce the money supply economy by decreasing bond prices and increasing interest rates. This helps reduce spending because when there is less money to go around, those who have money want to keep it and save it, instead of spending it.

Reserve Requirements

- 4) The second tool is to increase reserve requirements on the amount of money banks are legally required to keep on hand to cover withdrawals. The more money banks are required to hold back, the less they have to lend to consumers.

Fiscal Policy

- 5) The government can also increase taxes (such as income tax and VAT) and cut spending. This improves the budget situation and helps to reduce demand in the economy.
- 6) Both these policies reduce inflation by reducing the growth of aggregate demand. If economic growth is rapid, reducing the growth of AD can reduce inflationary pressures without causing a recession.
- 7) If a country had high inflation and negative growth, then reducing aggregate demand would be more unpalatable as reducing inflation would lead to lower output and higher unemployment. They could still reduce inflation, but it would be much more damaging to the economy

Passage B

- 1) For any economy, inflation is a complex phenomenon. While moderate inflation is usually good for an economy, if it goes beyond it, then it can cause a disastrous situation for the economy. The government takes different measures to control inflation of different types as explained below.

Demand Pull Dilation Control

- 2) In order to control the demand-pull inflation, the government undertakes some monetary measures and incorporates certain changes to the fiscal policy.

Monetary Measures

- 3) One of the commonly used measures to control inflation is controlling the money supply in the economy. If the Government decreases the supply of money, then the demand will fall, leading to a fall in prices. Therefore, the Government may decide to withdraw certain paper notes and/or coins from circulation. This decreases the money supply.
- 4) It is important to note that a major portion of the money supply lies with banks in the form of deposits or bank credit. Therefore, by reducing the bank's rate of lending (amount of money offered as credit), the government can considerably reduce the supply of money in the economy.

Fiscal Policy Measures to Control Inflation

- 5) Apart from the monetary measures, the government also uses fiscal measures to control inflation. A country's fiscal policy has two essential components - government revenue and expenditure.
- 6) Typically, when the aggregate demand exceeds the aggregate supply, an inflationary gap arises. The Government can take these fiscal measures to control inflation:
 - 1 Take steps to decrease the overall government expenditure and transfer payments.
 - 2 Increase the rate of taxes causing individuals to decrease their total expenditure, leading to a decrease in demand and a drop in the money supply in the economy.

1 What do Passages A and B say about the consequences of inflation?

- A** It becomes more expensive to buy goods.
- B** Money is worth less and it can be bad for the economy.
- C** It makes people wealthier, but causes problems with the economy.
- D** Currency is worth less, but there are positive effects for the economy with high inflation.

2 What can we understand from Pages A and 11 about controlling inflation through money supply?

- A** It can be done by banks lending less money to members of the public
- B** It can be controlled because people want to keep their money and save it.
- C** It can be done by increasing the amount banks lend and decreasing bond prices.
- D** It can be done through increasing interest rates and reducing money in circulation.

3 What can we understand from Passages A and B about tax?

- A It is used to make people spend less.
- B It has little effect on controlling inflation.
- C VAT is one of the main types of tax used to control inflation.
- D Tax reduces demand in the economy and therefore controls inflation.

4 What do Passages A and B say about aggregate demand?

- A Low aggregate demand can lead to unemployment.
- B Aggregate demand can sometimes cause negative growth.
- C Keeping a balance in aggregate demand helps control inflation.
- D Aggregate demand must exceed aggregate supply.

PASSAGE 75

Early Astronomy

Ancient Instruments and Measuring the Stars

- 1) The most ancient device found in all early civilizations, is a “shadow stick”. The shadow cast from a shadow stick was used to observe the motion of the Sun and thus to tell time. Today we call this instrument a Gnomon. The name gnomon comes from the Greek and refers to any L-shaped instrument, originally used to draw a right angle.
- 2) In Euclid Book II, where Euclid deals with the transformation of areas, the gnomon takes the form of an “L-shaped” area touching two adjacent sides of a parallelogram. Today, a gnomon is the vertical rod or similar device that makes the shadow on a sundial.
- 3) The Merkheth is one of the oldest known astronomical instruments. It was developed around 600 BCE and uses a plumb line to obtain a true vertical. Babylonian and Egyptian astronomers were able to measure the altitude and lateral displacement of heavenly objects from a particular direction by using a Merkheth, thus giving the earliest ideas of turning, or angle.
- 4) A pair of merkheths were used to establish a North-South direction by lining them up, one behind the other, with the Pole Star. Viewing the plumb lines through the sight made sure the two merkheths and the sight were in the same straight line with the Pole Star. Using a water clock to determine timings, this arrangement of merkheths allowed people to take measurements of night-time events, for example times when certain stars crossed the vertical plumb line (a “transit line”).
- 5) The Egyptians divided the 360 degrees of the ecliptic into 36 sections of 10 degrees each. This division was known before 2300 BCE. Each ten-degree section (called a decan from the Greek for ten) contained a constellation of stars lined up along the ecliptic. Since the Earth makes a full rotation in 24 hours, the stars in a new decan will rise above the horizon about every 40 minutes. The system of decans was used for determining the night hours and the seasons.

Babylonian Astronomers

- 6) Observations of celestial bodies by the Babylonians from about 1,800 BCE gave rise to the eventual division of the circle into 360 degrees, and by about 500 BCE, the division of the heavens into twelve regions of 30 degrees each, often referred to as the 12 houses of the zodiac. The Babylonians recorded the events of the lunar month, the daily movement of the sun across the sky over the year, and the rising and setting of the major planets. So, by 750 BCE astronomers had a reasonably accurate means of measuring the elevation (latitude) and lateral direction (longitude) of all objects in the heavens. They built up an extensive collection of data, and made tables of the positions of objects in the sky at any given time through a year (these tables are called ephemerides).
- 7) Using observational techniques like heliacal rising, which occurs when a planet, star or other body first becomes visible above the eastern horizon at dawn, it was discovered that:
 - the constellations of the zodiac completed a full circle through the sky once a year
 - the Sun's apparent movement daily across the sky formed 1360 of a circle
 - the moon moved through about 13360 of a circle each day
 - the Ecliptic was inclined to the horizon (about 2312 degrees)
 - planets were travelling through the starry background in regular paths that were sometimes moving back on themselves in a loop (retrograde)
 - eclipses of the moon and the sun could be predicted
 - transits of planets (e.g., Venus) moving across the face of the sun, and occultations (where the moon covered the stars) could be observed. These observations continued over many centuries, slowly becoming more accurate, so that ancient people were able to make star maps, and detect the regular events in the heavens.
- 8) Many seasonal phenomena like the flooding of the Nile, or special events like religious ceremonies were linked to astronomical phenomena. The ability to predict some of these major astronomical events gave rise to astrology, where people believed that there was a link between heavenly and earthly events, and that the stars had some control over their lives. See this BBC news item about a prehistoric star map.

- 9) The Babylonians and Chinese both believed that the earth and the moon were spherical, that the earth and the moon rotated on an axis, and that the sun and the planets moved in circles round the earth. This enabled them to be able to explain the phases of the moon, and predict eclipses of the moon and the sun by believing that the earth cast a shadow on the moon, and the moon cast a shadow over the sun. They were able to predict paths of other objects across the sun, for example the transit of Venus, a description and explanation of which can be found on Wikipedia.
- 10) The Babylonian astronomers recorded astronomical data systematically and by the Seleucid period (330-125BCE) there were a great many astronomical tablets showing ephemerides for the moon and the major planets. Many of the tablets contain "procedures" or instructions for how to calculate intervals between astronomical events using the properties of simple arithmetic progressions. These procedural processes were the earliest steps of a mathematical astronomy, and both the procedures and the data were used by those who came later. The Babylonians wrote down lists of numbers, in what we would call an arithmetic progression and recognized that numbers repeated themselves over periods of time.

Chinese Astronomy

- 11) The Chinese were the most accurate observers of celestial phenomena before the Arabs. "Oracle Bones" with star names engraved on them dating back to the Chinese Bronze Age (about 2,000 BCE) have been found, and very old star maps have been found on pottery, engraved on stones, and painted on the walls of caves. Surviving records of astronomical observations made by two astronomers Shi Shen and Gan De date from the 4th century BCE.
- 12) Shi Shen wrote a book on astronomy, and made a star map and a star catalogue. In 364 BCE Gan De made the first recorded observation of sunspots, and the moons of Jupiter and they both made accurate observations of the five major planets. Their observations were based on the principle of the stars rotating about the pole (equivalent to the earth rotating on its axis).
- 13) The oldest star map found so far is from Dunhuang. Earlier thought to date from about 940 CE, it was made with precise mathematical methods by the astronomer and mathematician Li Chunfeng (602-670) and shows 1339 stars in 257 Chinese star groups with a precision between 15 and 4 degrees of arc. In all there are 12 charts each in 30-degree sections displaying the full sky visible from the Northern hemisphere. Up to now it is the oldest complete preserved star atlas discovered from any civilization. It has been on display this year in the British Library to celebrate 2009 as the International Year of Astronomy.
- 14) Some elements of Indian astronomy reached China with the expansion of Buddhism (25 220 CE). Later, during the period (618-907 CE) a number of Indian astronomers came to live in China and Islamic astronomers collaborated closely with their Chinese counterparts particularly during (1271-1368).
- 15) Very little of the knowledge of the Indians and the Chinese was known in Europe before the Portuguese navigators and the Jesuit scientist Matteo Ricci in the fifteenth century. Babylonian astronomy contributed direct empirical data as a foundation for Greek theory and exactly the same data which provided the information for the "zig-zag" data results in Babylonian theory were used to calculate the mean motions of the sun and moon by Hipparchus.

1 Who used the "Merkhet" to measure altitude?

- A** Babylonian and Egyptian astronomers.
- B** Babylonian and Greek astronomers.
- C** Greek and Egyptian astronomers.
- D** Greek and Chinese astronomers.

2 What two objects did the Babylonian and Chinese believe rotated an axis?

- A The sun and the moon
- B The earth and the sun
- C **The earth and the moon**
- D The sun and the Venus

3 What did Gan De make in 364 BC?

- A A star map and observations of Jupiter's moons.
- B A star catalogue and observations of five planets
- C **Observations of five planets and Jupiter's moons**
- D Observations of Jupiter's moons and a star catalogue

PASSAGE 76

Motor Development

- 1) As an infant's muscles and nervous system mature, more complicated skills emerge. With minor exceptions, the **sequence** of physical (motor) development is universal. Babies roll over before they sit unsupported, and they creep on all fours before they walk. These behaviors reflect not imitation but a maturing nervous system; blind children too, crawl and walk.
- 2) But there are individual differences in the timing of this sequence. In the United States, for example, 25 percent of all babies walk by age 11 months, 50 percent within a week after their first birthday, and 90 percent by age 15 months.
- 3) There are also cultural differences in timing. Although such differences could be genetic, experiments reveal that experience does predict motor behavior. Consider Ugandan babies, for example, who usually walk by 10 months. Unlike babies from other cultures who spend much of the day lying in a crib, Ugandan babies experience more intimate and rhythmic physical contact while being carried on the back. Two-week-old babies wave their arms more if they can see them, suggesting that they are learning to visually control their movements. Although 3-month-old infants still cannot efficiently reach and grab something, their seemingly spontaneous kicking movements become more purposeful and coordinated when they activate a mobile.
- 4) But nature (genes) plays a **major** role, too. Identical twins typically begin sitting up and walking on nearly the same day. Biological maturation - including the rapid development of the cerebellum at the brain's rear - creates a readiness to learn walking within 2 or 3 months of age 1

1 Why can Ugandan babies usually walk by 10 months?

- A **They imitate their mothers.**
- B They wave their arms more.
- C Their muscles develop faster.
- D Their mothers carry them more.

2 What is the effect of infants being able to see their arms?

- A **They move them more.**
- B Their kicking improves.
- C Their brains develop faster.
- D They reach and grab sooner

3 The word “sequence” in Paragraph (1) is closest in meaning to.....

- A improvement
- B experience
- C success
- D **order**

4 The word “major” in Paragraph (4) is closest in meaning to.....

- A usual
- B possible
- C **important**
- D different

PASSAGE 77

The Spanish Flu

- 1) From 1918 to 1920 the virus known as the Spanish Flu infected 500 million people worldwide, killing 50 to 100 million of them. The only continent it did not reach was Antarctica; deaths were registered from northern Alaska to the islands of Samoa. The virus began in conditions that were perfect to help it spread across the globe, turning the battlefields of World War I into huge centers of infection. Though the flu had long been a familiar disease, the subtype (special type) of 1918 took scientists by surprise. They were shocked as much by the speed of its spread as by the number of people it killed. Though some experts believe the virus’s origins were in Europe, the theory most accepted today suggests that it began in the United States, and later travelled on an army ship to the battlefields of France. From there, an army of disease germs, like enemy soldiers in a secret war ‘Ashgan’, spread out through the air and infected a third of the world’s population, killing between 25% and 5% of everyone on earth. In the future, suggests the World Health Organization, there will be more and perhaps more deadly flu pandemics (worldwide diseases), threatening global health and security and putting the future of human society at risk. The virus won’t need a great war to help it cover the earth; it will be enough for one carrier to get on an airplane and, in less than 20 hours, cover the distance between Tokyo and New York, or between Sydney and Doha.

1 What phrase other than “Spanish Flu” does the writer use to describe the deadly virus of 1918?

- A **enemy soldiers**
- B World War I
- B familiar disease
- D centers of infection

2 Which of the following statements about the Spanish Flu is an opinion?

- A **It began in the United States.**
- B It killed at least 50 million people.
- C There were no infections in Antarctica.
- D Now it could spread across the world in one day.

3 How is the view of some experts about the origins of the Spanish Flu different from the most common view?

- A They believe there were two types of the virus.
- B They believe it started in the United States.
- C They believe it was a biological weapon.
- D **They believe it began in Europe.**

4 What can we understand from the passage about World War I?

- A It was a secret war.
- B It was the origin of the Spanish Flu.
- C **It increased deaths from the Spanish Flu.**
- D It killed between 50 and 100 million people.

5 What can we understand from the passage about the Spanish Flu?

- A Governments lied about it.
- B **It would spread faster now.**
- C It will come back in the future.
- D Fewer people would die from it now.

PASSAGE 78

Sociology

- 1) generally, learning sociology provides us with what sociologists call the sociological imagination. Sociological imagination is a particular way of looking at the world around us through sociological lenses. It is a way of looking at our experiences in light of what is going on in the social world around us. This helps us to appreciate the social and non-biological forces that affect, influence and shape our lives as individuals, groups, and communities. Sociological imagination helps us look beyond individual psychology to the many and varied facets of social and cultural forces, and "the recurring patterns in peoples' attitudes and actions, and how these patterns vary across time, cultures and social groups.
- 2) Learning sociology helps us understand how social forces influence our goals, attitudes, behavior, and personality. We become more sensitive towards the social issues. Furthermore, learning sociology helps to cast aside our own biased assumptions, stereotypes and ethno-centric thinking and practices to become more critical, broad-minded and respectful in our interpersonal and inter-group relationships. By learning sociology, we can be more humane and people- centered; we give high value to human dignity.
- 3) In general, sociology increases our self-knowledge. Learning sociology can provide us with self-enlightenment. When we learn sociology, we gain more knowledge about the conditions of our own lives, and about the way our society and social system function. As such knowledge increases, we can be more empowered to influence the direction of forces that affect our lives. For example, we can be more responsive to the various policies set by governments; and can suggest our own policy initiatives and alternatives.

1 What important idea about the “sociological imagination” does the writer mention in paragraph (1)?

- A It helps us see how the situations and events around us affect our lives and the lives of others.**
- B It helps us think fairly, be open and honest, and treat others with kindness and respect.
- C It helps us understand the reasons why we think and act the way we do.
- D It helps us understand how government policies affect us, and how we can affect government policies.

2 What important point about learning sociology does the writer make in paragraph (2)?

- A It helps us influence society.
- B It helps us see the forces that shape society.
- C It helps us understand our hopes and beliefs better.
- D It helps us understand others and treat them kindly.**

3 Why does the writer mention government policies?

- A To give an example of how we can treat others more fairly.
- B To give an example of how we can become more critical.
- C To give an example of how social forces affect our beliefs.
- D To give an example of how we can affect the forces in our lives.**

4 What is the main topic of the passage?

- A Learning sociology helps us become ethno-centric thinkers.
- B Self-enlightenment is a particular way of looking at the world.
- C Learning sociology helps us understand the world and our place in it.**
- D Seeing the world through “sociological imagination” makes the world seem better.

PASSAGE 79

Biotechnology

- 1) In the past couple of decades, the field of biotechnology has exploded. Biotechnology companies make products including vaccinations, medicines, and industrial bacteria that can be used to treat waste or clean up toxic spills.
- 2) Biotechnology is closely related to the fields of genetics and genetic engineering, which have also made dramatic advances in recent years. Genetics is the study of genes and heredity, while genetic engineering is the changing of genetic material to produce specific results. Beginning in the 1950s, genetic researchers led by Rosalind Franklin, J.D. Watson and F.H.C. Crick, examined the chemical code carried by all living things. Their research established the central role of DNA in the chromosomes that determine human heredity. Their work revealed the “double helix” spiral-shaped DNA that carries hereditary traits from parents to children.
- 3) Ongoing genetic research has produced new drug therapies to fight human diseases. Research has **also** created new strains of fruits and vegetables that are intended to fight disease or thrive in conditions where they usually don't grow. Genetic clothing, or the process of creating identical organisms from the cell of an organism, has many practical applications in raising animals and in biological research.
- 4) Biotechnology and genetic engineering have brought benefits, but also debate. Some people understandably, believe that genetically modified foods are unnatural and potentially dangerous. The possibility of cloning genetically identical mammals has also raised questions about the role of science in creating and changing life.

1 What does paragraph (4) say about biotechnology and genetic engineering?

- A They are dangerous for mammals.
- B They can fight diseases.
- C **They have brought benefits and debate.**
- D They are useful for the sciences.

2 What can be used to fight human disease?

- A **Fruit created from genetic research.**
- B DNA that carries hereditary traits.
- C Biological research on animals.
- D Genetic cloning of animals.

3 Why does the writer use the word “also” in paragraph (3)?

- A To give an example of drug therapies.
- B To show that genetic engineering is different from biotechnology.
- C To explain the dangers of genetically modified foods.
- D **To give more information about products made from genetic research.**

4 What does the writer think about the dangers of genetically modified foods?

- A He thinks it is safe.
- B He is NOT sure if it has a negative effect.
- C He understands why people think it is dangerous.**
- D He believes more research should be done.

PASSAGE 80

- 1) A watch is a portable timepiece that is designed to be worn on the wrist or carried in the pocket. The movement of a watch is driven either by a spring or by electricity. Along with clocks, watches are the most common devices for measuring time.
- 2) Watches were developed later than clocks. The first portable timekeeper or watch was produced during the Renaissance. A weight and a crude escapement were suitable in clocks but could not be used in a portable watch. In the early 1500s a coiled metal spring that transmitted energy as it unwound was substituted for the weight. By the 1580s, about the time of Galileo's pendulum experiments, the first commercial watches were being produced in small quantities in Nuremberg (Nunberg), Germany. Known as Nuremberg eggs, these early watches were portable but had only an hour hand because the escapement mechanism was too inaccurate to show minutes.
- 3) The English physicist Robert Hooke, who introduced the basic pendulum and escapement mechanisms in clocks in the 1660s, applied the same idea to watches. He attached a small balance unit to the mainspring unit. A balance spring, or hairspring, was used to control the oscillations of the balance unit. This design formed the basis for all subsequent mechanical watches.
- 4) The mechanism of mechanical watch is made up of six different parts. These are the mainspring, which is the source of energy; the gear train, which transmits the energy; the dial train, which governs the movement of the hands; the winding and setting mechanism; the escapement and balance unit, which controls the release of energy; and the plates, or framework, which enclose and protect the movement.
- 5) In operation the mainspring unwinds to turn the barrel, which drives the escape, or great, wheel through a gear train. The wheel moves in one direction until stopped by a pallet arm of the pallet and fork – the part analogous to the detent of a clock. The pallet and fork assembly is attached to the balance wheel, which is then given an impulse from the escape wheel.

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- 6) The escapement and balance assembly are essential to an accurate watch mechanism because they control the release of energy from the mainspring and the time in which each release of energy is made. The oscillations of the balance, regularity of its movements, are controlled with a hairspring or escapement spring. When the balance wheel moves in one direction, its tiny hairspring is wound. As the escape wheel is stopped by one of the pallet arms, the hairspring uncoils. The balance wheel, in turn, is connected to the coiled mainspring, which winds as the balance wheel moves. When the pallet and fork assembly releases the escape wheel, the wheel rotates one tooth until caught again by the other pallet arm. The balance wheel then turns in the opposite direction until the other pallet arm stops the escape wheel. This cycle continues and causes the familiar ticking sound of the mechanical watch. The escape wheel is stopped and released every one-fifth of a second. Thus, the balance wheel swings back and forth 300 times a minute, or 432,000 times a day. As in a clock, a series of gears transfers the motion of the escape wheel to the hour, minute, and second hands.
- 7) Electric-powered watches use one of three drive systems:
- (1) the galvanometer drive, consisting of the conventional balance-hairspring oscillator, kept in motion by the magnetic interaction of a coil and a permanent magnet,
 - (2) the induction drive, in which an electromagnet attracts a balance containing soft magnetic material, or
 - (3) the resonance drive, in which a tiny tuning fork (about 1 inch [25 millimeters] in length), driven electrically, provides the motive power. Both galvanometer and induction drive types use a mechanical contact, actuated by the balance motion, to provide properly timed electric-drive pulses. Each oscillation of the balance operates a time-indicating gear train by advancing a toothed wheel one tooth.

1 What starts the movement of a watch?

- A** A spring or a pendulum
- B** Electricity or a weight
- C** spring or a weight
- D** Electricity or a spring

2 What controls the release of energy in a mechanical watch?

- A** The gear and dial train
- B** The plates and balance unit
- C** The winding and setting system
- D** The balance and escapement unit.

3 Which two types provide timed electric-drive pulses?

- A** The galvanometer and induction drive
- B** The induction and resonance drive
- C** The electronic and induction drive
- D** The galvanometer and resonance drive

PASSAGE 81

- 1) Cultures differ in terms of the particular norms that they find important and that guide the behavior of the group members. Social psychologists have found that there is a fundamental difference in social norms between Western cultures and East Asians cultures. Norms in Western cultures are primarily oriented toward individualism, self-enhancement and independence. Children in Western cultures feel special about themselves. They enjoy getting gold stars on their projects and the best grade in the class. Adults in Western cultures are oriented toward promoting their own individual success, frequently in comparison with others.
- 2) Norms in the East Asian cultures, on the other hand, are more focused on other-concern. These norms indicate that people should be more fundamentally connected with others and thus are more oriented toward interdependence, or collectivism. In East Asian cultures, children are taught to focus on developing harmonious social relationships with others, and the predominant norms relate to group togetherness, connectedness, and duty and responsibility to one's family. As one example of these cultural differences, research conducted by Shinobu Kitayama and his colleagues found that East Asians were more likely than Westerners to experience happiness as a result of their connections with other people, whereas Westerners were more likely to experience happiness as a result of their own personal accomplishments.
- 3) It is important to be aware of cultures and cultural differences, at least in part because people with different cultural backgrounds are increasingly coming into contact with each other as a result of increased travel and immigration and the development of the internet and other forms of communication. In the United States, for instance, there are many different ethnic groups, and the proportion of the population that comes from minority groups is increasing from year to year. Being aware of cultural differences and considering their influence on how we behave toward others in an important part of a basic understanding of social psychology.

1 What idea does the expression “personal accomplishments” repeat?

- A** Social relationship
- B** Individual success
- C** Predominant norms
- D** Cultural differences

2 Which of the following does the writer say is a fact?

- A** The USA includes various ethnic groups.
- B** East Asian cultures focus on connectivity.
- C** Achievement determines happiness in the West.
- D** Cultures change as they interact with each other.

3 How is the Western culture's view of happiness different from the Eastern culture's view?

- A** It is linked to past experiences.
- B** it is linked to physical health.
- C** It is linked to relationship.
- D** It is linked to individuals.

4 What can we understand about Western cultures from paragraph (1)?

- A** they respect social duties.
- B** They encourage competition.
- C** They promote artistic values.
- D** They rely on modern technology.

5 What can we understand about cultures from paragraph (3)?

- A** They are dynamic.
- B** They act in isolation.
- C** They are hard to analyze.
- D** They have several levels.

PASSAGE 82

Yellowstone National Park

- 1) Established in 1872, Yellowstone National Park is not only the oldest national park in the United States but also in the world. It is also one of the largest, and probably the best-known, national parks in the United States. It is located principally in northwestern Wyoming and partly in southern Montana and eastern Idaho. The park, which forms a square like rectangle, is 63 miles (101 kilometers) from north to south and 54 miles (87 kilometers) from east to west at its widest point; it covers an area of 3,472 square miles (8,992 square kilometers). Grand Teton National Park lies to the south, and on all other sides Yellowstone is surrounded by national forests. Yellowstone's headquarters are at Mammoth Hot Springs near the northern entrance to the park.
- 2) Most of the park consists of broad volcanic plateaus with an average elevation of about 7,875 feet (2,400 meters). Three mountain ranges, each running roughly north to south, protrude into the park: the Gallatin Range in the northwest, the Absaroka Range in the east, and the northern extremity of the Teton Range along the park's southwestern boundary. The tallest mountains in the park are in the Absarokas, where many summits exceed elevations of 10,000 feet (3,050 meters). The range's Eagle Peak, on the park's boundary in the southeast is the high point reaching 11,358 feet (3,462 meters). Within its rugged mountains are spectacular deep glacier carved valleys.
- 3) Yellowstone is also known for its many scenic lakes and rivers. The park's largest body of water is Yellowstone Lake, which has a surface area of 132 square miles (342 square kilometers) and lies at an elevation of 7,730 feet (2,356 meters), making it the highest mountain lake of its size in North America. The Yellowstone River enters at the southeast corner, flows generally northward (including through Yellowstone Lake), and exits near the northwest corner of the park. The river's Yellowstone Falls, located in the north-central part of the park, descend in two majestic cascades. The falls constitute the western end of the spectacular Grand Canyon of the Yellowstone. There the river has cut a gorge 19 miles (30 kilometers) long, between 800 and 1,200 feet (240 and 370 meters) deep, and up to 4,000 feet (1,200 meters) wide. The walls of the canyon are brilliantly colored in hues of red, pink, yellow, buff, lavender, and white.
- 4) Yellowstone's other noted geysers and thermal features include Giantess Geyser, with a two- to six-month wait between eruptions; Excelsior Geyser, which rarely erupts but discharges thousands of gallons of boiling water per minute; and the Fountain Paint Pots, with pink, plopping mud geysers, fumaroles, and a blue hot-spring pool. Steamboat Geyser can throw water to heights of 300 feet (90 meters) and higher and is the world's highest erupting geyser. Mammoth Hot Springs consists of a broad terraced hillside of travertine (calcium carbonate) deposited there by dozens of hot springs; some of the dazzling white rock is tinted by microorganisms on the rock.

- 5) Yellowstone's climate is influenced by the park's high average elevation, location deep within the continent, and mountainous terrain. Temperatures almost always decrease with elevation gain. Because of Yellowstone's large area and variegated topography, weather conditions at different locations within the park can vary widely at any given time. In addition, conditions can change dramatically in a short period of time at one location.
- 6) Summer days are warm and relatively sunny, with daytime temperatures reaching about 80° F (27° C) in July at lower elevations before dropping to nighttime lows in the 40s or 50s F (about 10° C); temperatures are usually cooler higher in the mountains. Although precipitation totals in the warm months generally are light, summer afternoon thunderstorms are common. Winters are cold and snowy, as temperatures rarely rise above the mid-20s F (about -4° C) and often drop to 0° F (-18° C) or lower at night. Snowfall is heavy in most areas, especially at higher elevations, and typically begins in early autumn and continues into April or May.
- 7) About four-fifths of the park's area is forested, and the vast majority of the tree growth consists of lodgepole pines. Among the several other conifer species in the park are whitebark pine, found at higher elevations; and Douglas firs, which dominate at lower elevations. Cottonwoods and willows grow along streams, and stands of aspens occur in many sections. A significant event in Yellowstone's more recent history was the great fire of 1988 that charred some two-fifths of the park's forestlands. The forests subsequently have recovered, although areas have been subject to damage by insect pests. Hundreds of types of wildflowers thrive in a variety of habitats. Common species include phlox, lupines, cinquefoils, larkspurs, and Indian paintbrushes.
- 8) Yellowstone boasts the greatest assemblage of mammals—more than five dozen species—in the United States, outside of Alaska. Bison (buffalo), the largest of the mammals, were brought back from near extinction at the beginning of the 20th century. Other large mammals often seen in Yellowstone include elk (wapiti), mule deer, black bears, foxes, and coyotes. There are smaller populations of brown (grizzly) bears, bighorn sheep, pronghorns, mountain goats, and moose. Bobcats are thought to be present throughout the park, but their numbers are unknown, and there are occasional sightings of lynx and pumas (mountain lions). Common smaller mammals include badgers, martens, weasels, river otters, hares and rabbits, shrews, a variety of bats, and many species of small rodents. Wolves were successfully reintroduced into Yellowstone in 1995 and are now found throughout much of the park. Beavers have also made a significant comeback, and several hundred live along streams and lakes.

1 What are two features of the Yellowstone National Park?

- A oldest national park in the world and highest mountain lake in the USA.**
- B highest mountain lake in the USA and 54-mile (87 km) gorge
- C 45-mile (87 km) gorge and 3 dozen animal species.
- D a pink hot spring pool and 4 dozen animal species.

2 What damage occurred in Yellowstone National Park?

- A fire and insect pests.**
- B fire and water pollution.
- C insect pests and large amount of trash.
- D water pollution and large amount of trash.

3 What types of trees are found in Yellowstone National Park?

- A oak and lupine.
- B Douglas fir and oak.
- C cottonwood and redwood.
- D cottonwood and Douglas fir.

PASSAGE 83

Passage A:

Phobias

- 1) A phobia is a specific fear of a certain object, situation, or activity. Most people learn to live with their phobias, but for others the fear can be so debilitating that they go to extremes to avoid the scary situation. A person who suffers from arachnophobia (fear of spiders), for example, may refuse to enter a room until it has been checked for spiders, or may refuse to take a vacation in the countryside because spiders may be there.
- 2) A common phobia is social phobia, extreme shyness around people or anxiety in social situations. Social phobia may be specific to a certain event, such as using a public restroom, or it can be more generalized anxiety toward almost all people outside of close family and friends. People with social phobia will often experience physical symptoms in public, such as sweating, blushing and nausea. They are convinced that everybody around them notices these symptoms as they are occurring.
- 3) The most incapacitating phobia is agoraphobia, defined as anxiety about being in places from which escape might be difficult. Typical places that provoke the panic attacks are parking lots; crowded streets or shops; and bridges, tunnels, or expressways. People (mostly women) who suffer from agoraphobia may have great difficulty leaving their homes and interacting with other people.
- 4) Phobias affect about 9% of American adults, and they are about twice as prevalent in women as in men. In most cases phobias first appear in childhood and adolescence, and usually persist into adulthood.

1 Which of the following statements best summarizes gender differences from passages A and B?

- A Both genders are equally likely to be affected by the social phobia disorder.
- B In general, phobia affects more men, but social phobia affects more women.
- C While phobias generally affect more women, social phobia affects both genders equally.
- D Although social phobia affects both men and women equally, agoraphobia affects more women.

2 What can we understand about physical symptoms of social phobia from passages A and B?

- A They include sweating and fever.
- B They include headache and nausea.
- C They can make people blush and shake.
- D They can make communications of ideas difficult.

3 What do passages A and B say about the development of phobia?

- A It can result in over-dependence on drugs.
- B It can lead to the sufferer NOT leaving home.
- C It starts in childhood but disappears in adulthood.
- D **It usually persists across different stages of human life.**

4 According to passages A and B, what is one defining feature of social phobia?

- A Fear of close family member.
- B **Intense anxiety when dealing with people.**
- C Violent body movements in social situations.
- D Feeling anxious about being in crowded streets.

PASSAGE 84

Tuna and Salmon

- 1) Some estimates report the world's oceans are home to 20,000 species of fish. Ocean fish come in all shapes, sizes, and colors and live in drastically different depths and temperatures. Two of the most commonly known fish are tuna and salmon.
- 2) Salmon are fish that are known for making long, difficult journeys in order to breed. Salmon belongs to the scientific family Salmonidae, which also includes trout. There is one species, or type, of Atlantic salmon. There are six species of Pacific salmon: coho, chum, king, pink, sockeye, and cherry.
- 3) Tuna are large fish that live in most parts of the world's oceans. They belong to the same family of fish as mackerel. Tuna is one of the most popular foods that comes from the sea. Most of the tuna that fishers catch is canned. There are seven different species, or types, of tuna: bluefin, albacore, yellowfin, bigeye, blackfin, longtail, and southern bluefin. The skipjack tuna is related to these species, but it belongs to a separate group of fish.
- 4) The Atlantic salmon lives mainly in the North Atlantic Ocean. It breeds in the rivers of North America and Europe. Pacific salmon are found in the waters of the North Pacific. They breed in rivers near both the North American and Asian coasts.
- 5) Salmon come in a range of sizes. The Atlantic salmon weighs about 12 pounds (55 kilograms). The pink salmon usually weighs 3 to 6 pounds (14 to 27 kilograms). The king salmon may weigh 25 pounds (11 kilograms) or more. While in the ocean, salmon have a silver color and spots on their back and fins. During the breeding season, they undergo changes in color that vary by species.
- 6) A tuna has a long, rounded body. It is usually dark on top and silvery underneath. Some species have spots or stripes. Unlike other types of fish, a tuna can keep its body warmer than the temperature of the surrounding water. Many species of tuna are about 35 inches (90 centimeters) long. The bluefin tuna is the largest species. It can grow as long as 14 feet (4 meters) and weigh up to 1,800 pounds (800 kilograms).

- 7) After being born in fresh water, salmon travel to the ocean. They live there for one to three years. Then they travel back to where they hatched in order to breed. For some salmon, this can mean a trip of more than 2,000 miles (3,200 kilometers). Salmon may leap over waterfalls and cut through churning rapids to reach their home waters again. Once in fresh water, salmon stop eating and live off their body fat. The males fight for a mate. After a male and a female are paired, the female digs a pit and lays thousands of eggs. Most Pacific salmon die shortly after mating. Many Atlantic salmon, however, return to the sea and may breed again.
- 8) Tuna travel in large groups called schools. Some species travel long distances. Tuna feed on other fish, including herring, menhaden, and mackerel. Some species also eat small, spineless animals such as squid. Some types of tuna return to the waters where they hatched to spawn, or produce eggs.

1 How many types of Atlantic salmon are there?

- A** one **B** six
C seven **D** ten

2 How much does the Atlantic Salmon usually weigh?

- A** 25 pounds **B** 12 pounds
C 10 pounds **D** 6 pounds

3 Which of the following is the largest species of tuna?

- A** the yellowfin tuna **B** the longtail tuna
C the black tuna **D** the bluefin tuna

PASSAGE 85

St. Lucia

- 1) The Eastern Caribbean Island of St. Lucia is a part of a chain of volcanic islands known as the Lesser Antilles. St. Lucia is famous for its geothermal activity; heat from the earth's center creates natural hot pools and springs that attract tourists looking to relax in a natural bath!
- 2) St. Lucia may only be a small island-43 kilometres long and a maximum of 23 kilometres wide (covering 16 square kilometres in total) but its landscape is mixed. There are volcanic beaches, coral diving sites, luxury holiday resorts and fishing villages, and 76 square kilometres of rich rainforest.
- 3) The island of St. Lucia is known for its pair of pointy mountains, the Pitons, on its west coast. The west coast, where the capital city Castries is found, is met by the Caribbean Sea and is known for its amazing diving! The east coast of the island meets the Atlantic Ocean.
- 4) The entire population of St Lucia is approximately 178,000 people, which is quite low. Over the centuries, this island has attracted settlers from all over the world, so it has a rich culture. A wide range of religions, music, languages and food can be found here.
- 5) Most people were Amerindians, Caribs and European settlers (mainly from France). During the 19th century, waves of travelers from Europe, the Middle East, and even Japan made their lives in the Caribbean.

1 What is one important idea related to St. Lucia's landscape that the writer mentions?

- | | |
|--|---|
| A It has luxury resorts. | B It has Japanese settlers. |
| C It has a variety of cultures. | C It has many natural attractions. |

2 What is one important idea related to St. Lucia's population that the writer mentions?

- | | |
|--|---|
| A The population is mostly Amerindians. | B Its settlers are from the Middle East. |
| C It has a small number of people. | C It is a small island. |

3 What does the writer want to show by the example of hot pools and springs?

- | | |
|------------------------------|---------------------------------|
| A geothermal activity | B resort attractions |
| C a mixed landscape | C reasons settlers came. |

4 What is the main topic of the passage?

- | | |
|------------------------------|--------------------------------|
| A St. Lucia's tourism | B St. Lucia's history |
| C St. Lucia's culture | C St. Lucia's geography |

PASSAGE 86

Solutions and Problems

- 1) Some people do not like the word “problem”; they say, “we don’t have problems, we have solutions.” The word “problem” is used in different ways. It can mean something that is causing us a difficulty. The word “problematical” suggests a situation where we cannot see an easy solution to something. However, not all problems are like this. In some cases, we may enjoy problems and solve them for fun: for example, when doing a puzzle or playing a video game.
- 2) Most people have some sorts of problem in their lives and many of these may be solved with a little careful thought. The problem solving we are talking about here is based on reasons; it is often math, in the sense shape or number, but does not require a high level of formal math to solve. It is largely based upon the real world and is not abstract like much of mathematics.
- 3) Many people, from builders to architects, from soccer players to lawyers, use this type of problem solving in their everyday lives. On the face of it, critical thinking and problem solving might appear as quite separate disciplines. Most critical thinking questions are primarily word based, but many problem-solving questions contain number-based information. However, the skills used, especially in the application of reason, are quite similar. Scientists, politicians and lawyers will frequently use both word based and numerical data.

1 What are two expressions that the writer uses for “problem solving”

- A critical thinking and reasoning**
- B problematics and difficulties
- C word data and numerical data
- D puzzles and video games

2 Which of the following is the writer’s opinion?

- A Many careers involve problem solving
- B Many personal problems have a solution**
- C The word “problem” has different meanings
- D Some problems require knowledge of mathematics

3 What is one difference between critical thinking and problem solving?

- A Problem solving is more enjoyable than critical thinking.
- B Critical thinking requires knowledge of formal math.
- C One uses words while the other uses numbers.**
- D One is based on real world knowledge

4 How is the writer’s view of problems different from other people’s views?

- A She thinks solving problems requires knowledge of math.
- B She thinks most problems are too complex to solve.
- C She thinks the word problem is difficult to define.
- D She thinks problems can be entertaining.**

PASSAGE 87

Dopamine

- 1) What do drug addiction and Parkinson's disease have in common? Improper levels of dopamine. This chemical acts as a messenger between brain cells. Dopamine is important for many of our daily behaviors. It plays a role in how we move, for instance, as well as what we eat, how we learn and even whether we become addicted to drugs.
- 2) Chemical messengers in the brain are called neurotransmitters. They shuttle across the spaces between cells. These messengers then bind to docking-station molecules called receptors. Those receptors relay the signal carried by the neurotransmitter from one cell to its neighbor.
- 3) Different neurotransmitters are made in different parts of the brain. Two main brain areas produce dopamine. One is called the substantia nigra. It's a tiny strip of tissue on either side of the base of your brain. It sits in a region known as the midbrain. Close by is the ventral tegmental area. It, too, makes dopamine.
- 4) The substantia nigra is very important for movement. The term means "black substance" in Latin. And sure enough, this area of your brain is actually dark grey or black! The reason: Cells that produce dopamine also make another chemical that stains the area a dark color.
- 5) These two brain areas are very thin and tiny. Together they are smaller than a postage stamp. But the dopamine they produce relays signals that travel throughout the brain. Dopamine from the substantia nigra helps us begin movements and speech.

1 What is one important idea related to the "substantia nigra" that the writer mentions in paragraphs (3) and (4)?

- A** It is in two areas of the brain.
- B** Its name comes from Latin.
- C** It makes dopamine.
- D** It sends messages.

2 What is one important idea related to "neurotransmitters" that the writer mentions in paragraphs (1) and (2)?

- A** They can make people ill.
- B** They control levels of dopamine.
- C** They take information from cell to cell.
- D** They have an effect on people's feelings.

3 What does the writer want to show by the example of Parkinson's disease?

- A** the importance of dopamine
- B** the importance of what we eat
- C** the importance of neurotransmitters
- D** the importance of avoiding using drugs

4 What is the main topic of the passage?

- A** Neurotransmitters and movement
- B** Neurotransmitters and cells
- C** Dopamine and the brain
- D** Dopamine and health

PASSAGE 88

Conquering Cancer

- 1) Cancer is a serious disease, but when a tumor is localized, it can be removed by surgery. Skin cancer, the most common form of the disease, can usually be treated this way. Melanomas, the most serious form of skin cancer, can be removed surgically, but only if spotted very early.
- 2) Other forms of treatment make use of the fact that cancer cells grow rapidly and, therefore, need to copy their DNA more quickly than do most normal cells. This makes them especially vulnerable to damage from radiation. As a result, many tumors can be effectively treated with carefully targeted beams of radiation.
- 3) Medical researchers have worked for years to develop chemical compounds that would kill cancer cells, or at least slow their growth. The use of such compounds against cancer is known as chemotherapy. Great advances in chemotherapy have taken place in recent years and have even made it possible to cure some forms of cancer. However, because most chemotherapy compounds target rapidly dividing cells, they also interfere with cell division in normal, healthy cells. This produces serious side effects in many patients, and it is one of the reasons why scientists are so interested in gaining a better understanding of cell cycle proteins in cancer. The goal of many researchers is to find highly specific ways in which cancer cells can be targeted for destruction while leaving healthy cells unaffected.
- 4) Understanding and combating cancer remains a major scientific challenge, but scientists at least know where to start. Cancer is a disease of the cell cycle, and conquering cancer will require a much deeper understanding of the processes that control cell division.

1 What does paragraph (1) say about skin cancer?

- A It's a less frequent than other forms of cancer.
- B It can normally be removed by surgery.
- C People can get it from sunbathing.
- D Melanomas are easy to notice.

2 How can scientists avoid destroying healthy cells?

- A by treating cancer very early.
- B by copying the DNA in cancer cells.
- C by using chemotherapy or beams of radiation.
- D by better understanding cell cycle proteins in cancer.

3 Which word or words can we use to replace the word "therefore" in paragraph (2)?

- A instead
- B besides
- C in addition
- D as a result

4 Why does the writer use the word "However" in paragraph (3)?

- A to say that chemotherapy has its dangers
- B to give an example of how chemotherapy works
- C to repeat the previous sentence with fewer words
- D to say that the previous sentence is actually incorrect.

5 How does the writer feel about our understanding of cancer?

- A He feels hopeful because scientists have made at least some progress.
- B He feels excited because scientists are close to curing its most common forms.
- C He feels angry because some treatments make people feel ill.
- D He feels disappointed because few of the treatments work.

PASSAGE 89

Tourism in Jamaica

- 1) Tourism has become an increasingly important part of Jamaica's economy in recent decades. Tourism has improved the country's economy and increased its employment. It has also brought many opportunities to Jamaica's population. For example, in 2012 tourism provided almost \$13 billion to Jamaica's economy.
- 2) The income from tourism plays a **major** part in helping Jamaica's government to fund economic and social policies. The government has used the taxes from tourism to support special programs in education and health care. Tourism has also helped the country to improve its infrastructure or the basic system that a county needs to work properly. One example of this is that Jamaica began to develop its roads and airports, which tourists use during their visit to the country.
- 3) Along with developing the country's infrastructure, Jamaica has also started to protect some of its valuable natural resources. One example is that the country began to **identify** and protect its national parks and beaches. Now visitors must pay entry fees to visit these parks, which help to provide money to keep the parks protected. The government also works to keep the parks and beaches free from pollution and trash. These government policies have had a positive effect on tourism because tourists are able to have a better experience when they visit these places.
- 4) Jamaica continues to rely heavily on tourism for its economy. However, one of the disadvantages of tourism in the country is the rainy season, which extends from May to November. During this time, 25% of the hotel workers lose their jobs because there are very few tourists. This has had a negative effect on the lives of the people who work in the tourism industry in the country.

1 What did tourism lead to in Jamaica?

- A entry fees to parks.
- B increases in the prices of houses.
- C \$1.3 billion added to the economy.
- D unemployment of 25% of hotel employees.

2 What happened to workers that depended on tourism?

- A** They receive better wages and more leisure time.
- B** They receive better health benefits from their employers.
- C** They pay taxes that are used to improve roads and airports.
- D** They are unemployed for seven months when there are few tourists.

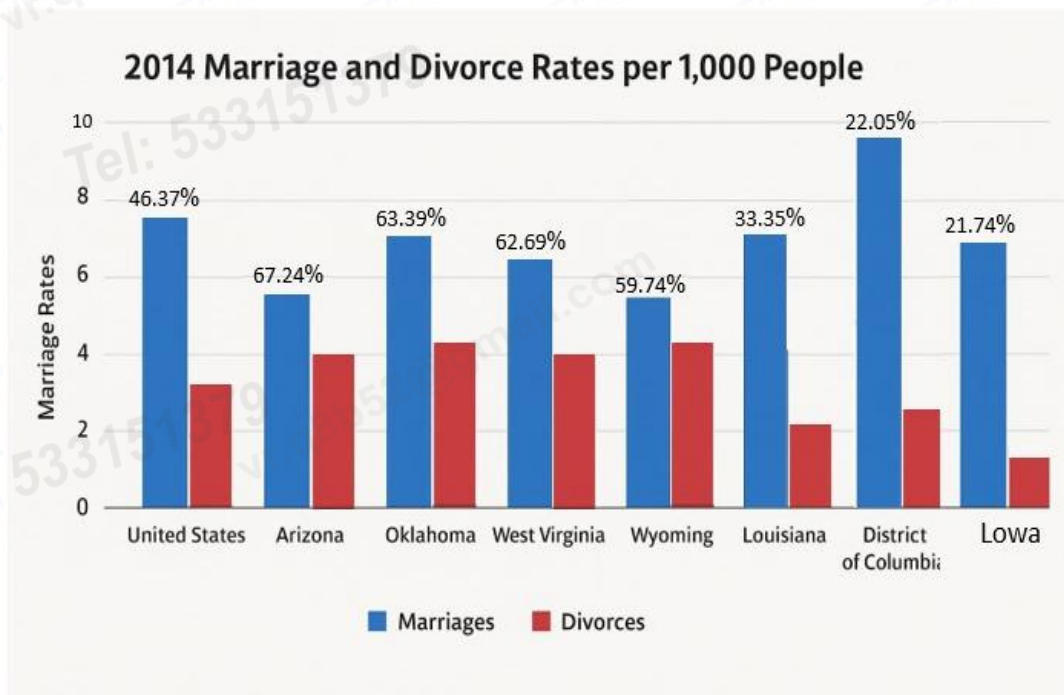
3 The word “major” in paragraph (2) is closest in meaning to.....

- A** important
- B** basic
- C** tiny
- D** secondary

4 The word “identify” in paragraph (3) is closest in meaning to.....

- A** name
- B** destroy
- C** relax
- D** sell

PASSAGE 90



1 Which state had the most marriages per 1000 people in 2014?

- A** District of Colombia
- B** Oklahoma
- C** Wyoming
- D** Arizona

2 Which state has the fewest divorces rates per 1000 people?

- A** West Virginia
- B** Oklahoma
- C** Louisiana
- D** Iowa

PASSAGE 91

Singapore

- 1) Though physically small, Singapore is an economic giant. It has been Southeast Asia's most modern city for over a century. The city blends Malay, Chinese, Arab, Indian and English cultures and religions. Its unique ethnic tapestry affords visitors a wide array of sightseeing and culinary opportunities from which to choose. A full calendar of traditional festivals and holidays celebrated throughout the year adds to its cultural appeal. In addition, Singapore offers luxury hotels, delectable cuisine and great shopping! The island nation of the Republic of Singapore lies one degree north of the Equator in Southern Asia. The country includes the island of Singapore and 58 or so smaller islands. Because of its efficient and determined government, Singapore has become a flourishing country that excels in trade and tourism and is a model to developing nations. The capital city, also called Singapore, covers about a third of the area of the main island.
- 2) Located at the tip of the Malay Peninsula, Singapore's tropical climate welcomes both leisure and business travelers year-round. The island republic's excellent infrastructure enables visitors to enjoy its many sites and attractions in a safe, clean and green environment. Award winning Changi Airport provides airlinks to major cities around the world. The train and subway systems are clean, fast and efficient. In addition, its state-of-the-art cruise terminal has established Singapore as one of the premier cruising centers of South East Asia and an exciting port of call on any Asian cruise itinerary.
- 3) In the city, there is no need for a car. Public transportation is excellent and walking is a good way to explore the city. All major attractions are also accessible by tour bus. Since the city is only 60 miles (100k) from the equator, the tropical temperatures do not vary much. Rainfall is fairly evenly distributed through the year. No matter when you choose to visit, warm weather will be abundantly available. The visitor is struck immediately by Singapore's abundance of parks, nature reserves, and lush, tropical greenery.
- 4) Singapore's progress over the past three decades has been remarkable, yet the island has not been overwhelmed by development. Visitors will discover a wealth of historical treasures from the past, in the beauty of older buildings, values and traditions that have survived in the face of profound social and geographical change.
- 5) Lacking any noteworthy natural resources, Singapore's early prosperity was based on a vigorous free trade policy, put in place in 1819 when Sir Stamford Raffles first established it as a British trading post. Later, mass industrialization bolstered the economy, and today the state boasts the world's second busiest port after Rotterdam, minimal unemployment, and a super-efficient infrastructure. Almost the entire population lives in upscale new apartments, and the average per capita income is over US\$12,000. Singapore is a clean, safe place to visit, its amenities are second to none and its public places are smoke-free and hygienic.

- 6) Forming the core of downtown Singapore is the Colonial District. Each surrounding enclave has its own distinct flavor, from the aromatic spice stores of Little India, to the tumbledown backstreets of Chinatown, where it is still possible to find calligraphers and fortune tellers, or the Arab Quarter, whose cluttered stores sell fine cloths and silks.
- 7) North of the city, are two nature preserves, Bukit Timah and the Central Catchment Area, along with the splendid Singapore Zoological Gardens. The east coast features good seafood restaurants set on long stretches of sandy beach. In addition, there are over fifty islands and islets within Singaporean waters, all of which can be reached with varying degrees of ease. Day trips are popular to Sentosa, the island amusement arcade which is linked to the south coast by a short causeway and cable car. Music, theater, nightlife: all are abundant in this remarkable city. Singapore used to be considered a "stop over" on the way to larger Asian cities. This is no longer true! Visitors seek out Singapore for business and finance and also for a fascinating and satisfying vacation for the whole family.
- 8) Singapore is both an island and a country, but perhaps its best description is that of city-state. Like the great city-states of the past, it offers civilization and order in the highest degree. Its combination of Western-style development and Eastern style calm seems to present the best of both hemispheres: It's a modern metropolis where you feel safe walking the streets, and it's an Asian business center that's a model of efficiency. Singapore is also a multicultural city, and close to one-quarter of its population are expatriates or foreign workers from all over the world. Known for its desire to become the technology hub of Asia, Singapore is the most wired country in the region.
- 9) Singapore shares another trait with historical city-states: Its authorities strongly believe that they can safeguard the status quo with regulations against almost anything and everything that - in their view - could possibly upset the sense of tranquility. In reality, visitors will find the place is not as restrictive as the long lists of hefty fines for such things as littering and jaywalking suggest. Some visitors to Singapore leave singing the praises of a society that "works," while others feel the government's near-compulsive fixation on cleanliness and order makes Singapore sterile in every sense of the word.

1 In what two areas is Singapore a successful country?

- A** management of natural resources and trade
- B** architecture and public transport
- C** business and finance
- D** trade and tourism

2 What two attractions are found north of the city of Singapore?

- A** Singapore Zoological Gardens and the Arab Quarter
- B** Bukit Timah and the Central Catchment Area
- C** Timah Sentosa and the Colonial District
- D** Little India and Bukit

3 In the early days, what helped strengthen Singapore's economy?

- A a strong trade policy and industrial development**
- B low unemployment and a free trade policy
- C natural resources and a busy trading port
- D tourism and industrial development

PASSAGE 92

Madagascar

- 1) Madagascar is an island country located off the south eastern coast of Africa. The island is the fourth largest in the world. Only Greenland, New Guinea, and Borneo are larger. Madagascar is known as the Great Red Island for its rich, red soil. Its capital is Antananarivo.
- 2) Madagascar lies in the western India Ocean. The Mozambique Channel separates the island from the African coast. The central part of Madagascar is a plateau, or high, flat land. Mountains rise above the plateau in some places. Maromokotro Peak in the north is the island's highest point. It rises 9,436 feet (2,876 meters). A narrow plain runs along the east coast. Low plateaus and plains cover the west. Rivers are short and fast flowing in the east and longer in the west. The east coast has a hot, humid tropical climate. The central plateau is cooler. The southwest is dry.
- 3) Grasses cover most of the island. Some tropical forests and mangrove swamps survive on the coasts. Hundreds of different kinds of orchid also grow in Madagascar. Madagascar has many types of animals that live almost nowhere else in the world. Two examples are lemurs and fossas. Lemurs are monkeylike animals that live in trees. Fossas are catlike mammals that hunt birds and lemurs. Many butterflies, chameleons, and crocodiles also live in the country.
- 4) Madagascar's people are known as the Malagasy. The Malagasy are more closely related to Indonesians than to Africans, even though the country is closer to Africa than to Indonesia. The Malagasy are divided into about 20 groups. The Merina make up the largest group. The country also has small groups of people from Africa, Asia, France, and the nearby island country of Comoros. Many people of Madagascar speak both the Malagasy and French languages. About half of the people are Christian, and most of the rest follow traditional Malagasy religions. Fewer than one-third of the people live in cities. Almost all the major cities and towns are in the east.
- 5) Madagascar is a poor country. Most of the people live by growing crops and by raising humped cattle called zebu. Rice is the main food crop. Farmers grow vanilla and cloves to sell to other countries. Vanilla from Madagascar is thought to be the best in the world. Madagascar also produces coffee, sugar, and shrimp. Madagascar's small industries make mainly cloth, clothing, cement, soap, beer, and cigarettes. Mines provide cobalt, chromite, graphite, gold, and gems. Cobalt is the main product. The country's share of world cobalt sales was nearly 4% in 1980.
- 6) People first came to Madagascar from Indonesia more than 1,100 years ago. Arab sailors arrived on the island in AD 1000. The Portuguese first came to Madagascar in 1500, and the French arrived and set up small towns so they could trade in the 1600s. The Malagasy Merina kingdom controlled much of the island in the early 1800s. The French defeated the Merina in 1895 France then ruled the island as a colony. The island became the independent Malagasy Republic in 1960. In the 1970s, the country's army took power. The country took the name Madagascar in 1975 In 1992, Madagascar held free elections for the first time in 17 years. The new government is working to improve the economy.

1 What is the main food crop in Madagascar?

- A cobalt B potatoes
C tea D **rice**

2 When did Arab sailors first arrive in Madagascar?

- A **1000** B 1100
C 1500 D 1600

3 When did the country take the name Madagascar?

- A 1970 B **1975**
C 1980 D 1992

PASSAGE 93

Public Libraries

- 1) As online learning becomes more common and more resources are converted to digital form, some local governments suggest that public libraries should be shut down and, in their place, everyone should be given an iPad with an e-reader subscription.
- 2) Proponents of this idea believe that it will save local cities and towns money because libraries are actually expensive to maintain. Libraries require a lot of land and real estate to house various books and resources, which makes it somewhat expensive to maintain. They also think it will encourage more people to read because they won't have to travel to a library to get a book; they can simply click on what they want to read and read it from wherever they are. They could also access more materials because libraries won't have to buy physical copies of books; they can simply rent out as many digital copies as they need.
- 3) However, it would be a serious mistake to replace libraries with tablets. Digital books and resources are associated with less learning and more problems than print resources. A study done on tablet versus book reading found that people read 20-30% slower on tablets, retain 20% less information, and understand 10% less of what they read compared to people who read the same information in print. Additionally, staring too long at a screen has been shown to cause blurred vision, dizziness, dry eyes, headaches, and eye strain, at much higher instances than reading print does. People who use tablets and mobile devices excessively also have a higher incidence of more serious health issues such as fibromyalgia, shoulder and back pain, and muscle strain.
- 4) While replacing libraries with tablets may seem like a simple solution, it would encourage people to spend even more time looking at digital screens, despite the myriad issues surrounding them. It would also end access to many of the benefits of libraries that people have come to rely on. In many areas, libraries are such an important part of the community network that they could never be replaced by a simple object.

1 What two words does the writer use to say that some local governments are determined to shut down local libraries?

- A seem and end B believe and think
C replace and convert D **suggest and encourage**

2 Which of the following is the writer's opinion?

- A** Starring at a screen is unhealthy.
- B** People read slower on tables.
- C** **Replacing libraries is a mistake.**
- D** Online learning is common now.

3 How is the writer's view about libraries different from some local government's view?

- A** He thinks libraries provide various resources.
- B** He thinks libraries are expensive to maintain.
- C** **He thinks libraries are important to the community.**
- D** He thinks libraries should be replaced with digital ones.

4 What can we understand from paragraph (3) about print books?

- A** **They are a better learning resource.**
- B** They are less expensive to buy.
- C** They are bad for your health.
- D** They make you read slower.

5 What can we understand from paragraph (2) about libraries?

- A** They are NO longer needed.
- B** They have a lot of material.
- C** They encourage people to read.
- D** **They cost a lot of money to keep.**

PASSAGE 94

Profitability and Success

- 1) Some management theorists argued that a conscientious manager in a for-profit setting act ethically by emphasizing solely the maximization of earnings. Most commentators, however, contend that ethical business leadership is grounded in doing right by all stakeholders directly affected by a firm's operations, including, but not limited to, stockholders, or those who own shares of the company's stock. That is, business leaders do right when they give thought to what is best for all who have a stake in their companies. Not only that, firms actually reap greater material success when they take such an approach, especially over the long run.
- 2) Nobel Prize-winning economist Milton Friedman stated in a now-famous New York Times Magazine article in 1970 that the only "social responsibility of a business is to increase its profits." This concept took hold in business and even in business school education. However, although it is certainly permissible and even desirable for a company to pursue profitability as a goal, managers must also have an understanding of the context within which their business operates and of how the wealth they create can add positive value to the world. The context within which they act is society, which permits and facilitates a firm's existence.
- 3) Thus, a company enters a social contract with society as whole, an implicit agreement among all members to cooperate for social benefits. Even as a company pursues the maximizing of stockholder profit, it must also acknowledge that all of society will be affected to some extent by its operations. In return for society's permission to incorporate and engage in business, a company owes a reciprocal obligation to do what is best for as many of society's members as possible, regardless of whether they are stockholders. Therefore, when applied specifically to a business, the social contract implies that a company gives back to the society that permits it to exist, benefiting the community at the same time it enriches itself.

1 Which of the following is an opinion?

- A Milton Friedman won the Nobel Prize.
- B One aim of a company is to make a profit for its stockholders
- C Business education focused on the profit only approached for a few years.
- D **Maximizing profit represents the only social responsibility of a company.**

2 How is the modern view of good management different from the traditional view?

- A It focuses only on making profits.
- B **It considers the benefit of all stakeholders.**
- C It carefully assigns roles within the company.
- D It develops specific strategies for improvement.

3 How is the writer's view of profitability different from Milton Friedman's view?

- A** He believes it should be the only goal of business.
- B** He believes it should consider the context of business
- C** He believes it should be achieved through reducing costs.
- D** He believes it should be built on careful market research.

4 What can we understand from Paragraph (2) about Milton Friedman?

- A** He believed in the social responsibility of profit companies.
- B** He supported establishing more free markets.
- C** He was an advocate of the profit only approach.
- D** He called for less government interference in business.

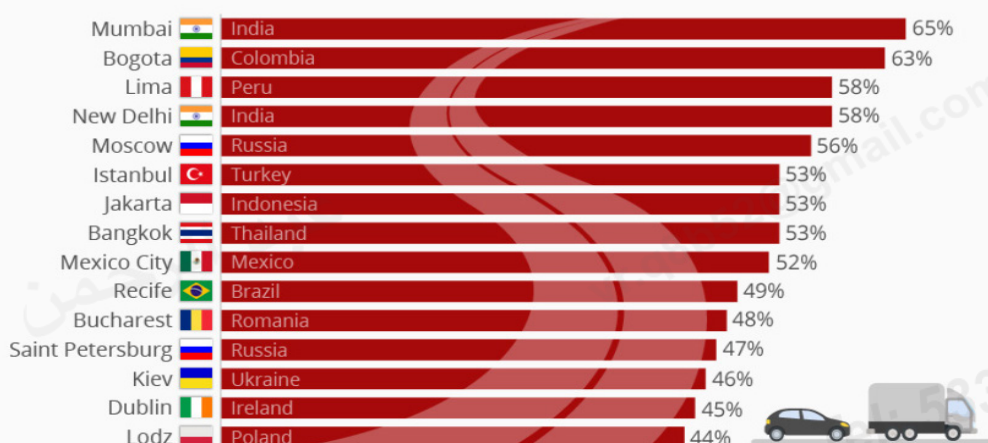
5 what can we understand from Paragraph (2) about the context within which a business operates?

- A** It is simple.
- B** It is irrelevant.
- C** It is important.
- D** It is complicated.

PASSAGE 95

The Cities With The Worst Traffic Congestion

Percentage of extra travel time due to congestion in 2018*



* 0% = uncongested free flow of traffic



@StatistaCharts Source: TomTom Traffic Index

statista

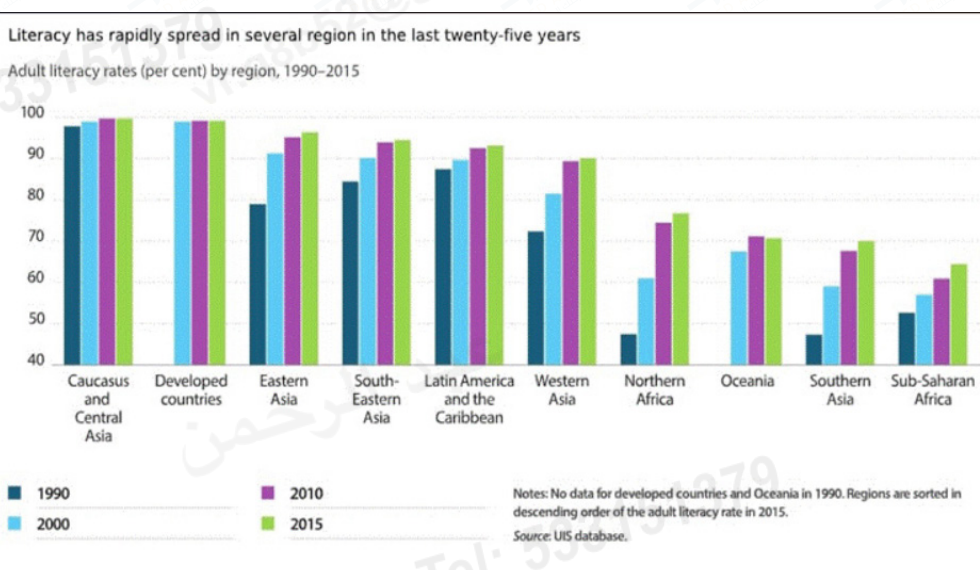
1 Which city has the worst traffic congestion?

- A Lodz
- B Cairo
- C **Mumbai**
- D Bangkok

2 Which city has the same level of traffic congestion as Lima?

- A Bogota
- B Moscow
- C New York
- D **New Delhi**

PASSAGE 96



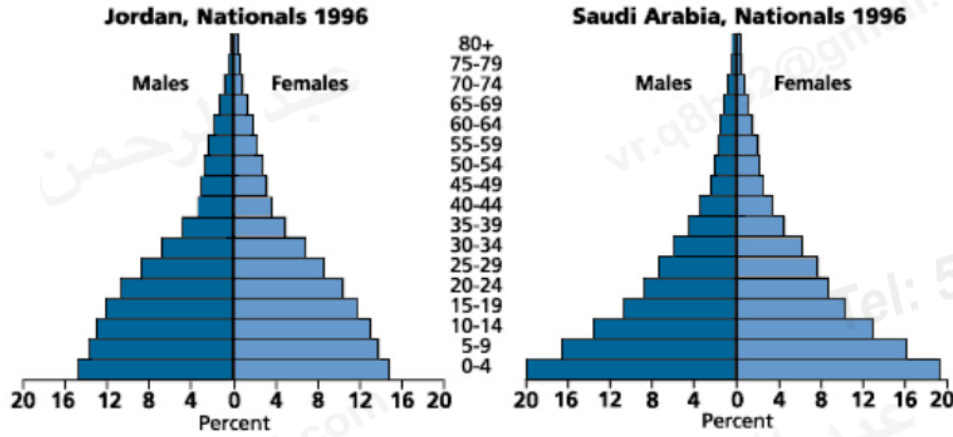
1 In what region has literacy decreased in the last five years?

- A Northern Africa
- B **Oceania**
- C South America
- D South America

2 What region had the highest adult literacy rates in 2015?

- A **Caucasus and Central Asia** B Developed Countries
C Western Europe D Eastern Asia

PASSAGE 97



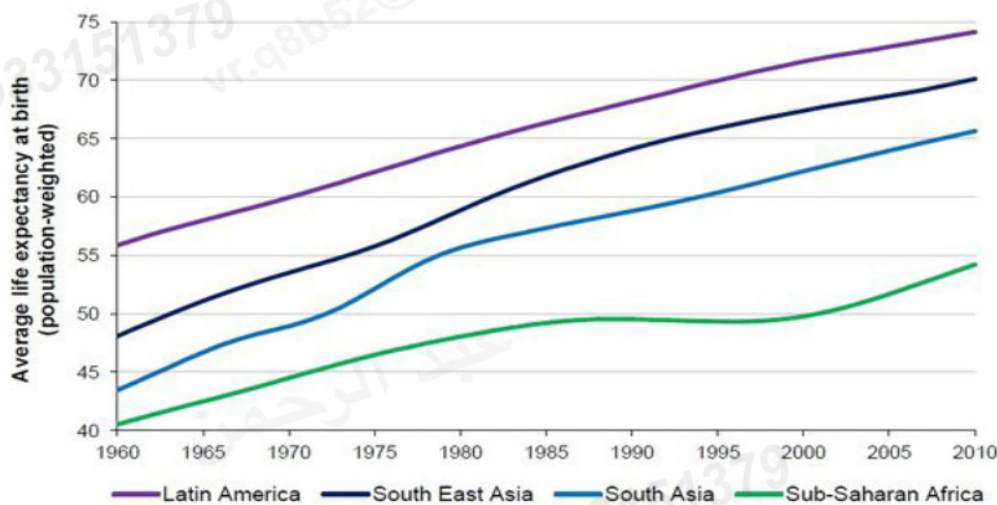
1 In 1996, what was the percentage of female Jordanian nationals ages 25-29?

- A 4% B 6%
C **8%** D 0%

2 In 1996, 17% of male Saudis were between which ages?

- A 0-4 years old B **5-9 years old**
C 10-14 years old D 15-19 years old

PASSAGE 98



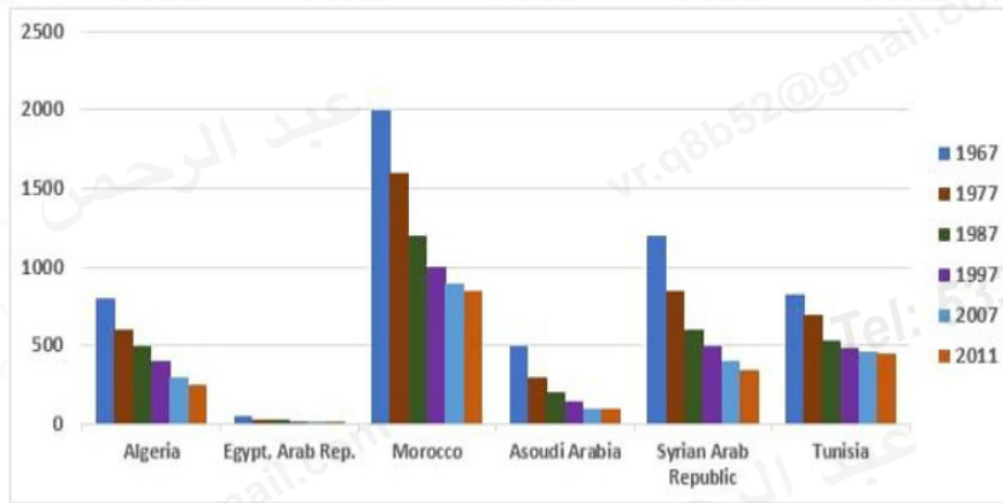
1 How much did life expectancy increase in Latin America between 1960 and 2010?

- A almost 25 years B **almost 20 years**
C almost 15 years D almost 10 years

2 What was the average life expectancy at birth in Sub-Saharan Africa in 1970?

- A about 45
B about 50
C about 55
D about 60

PASSAGE 99



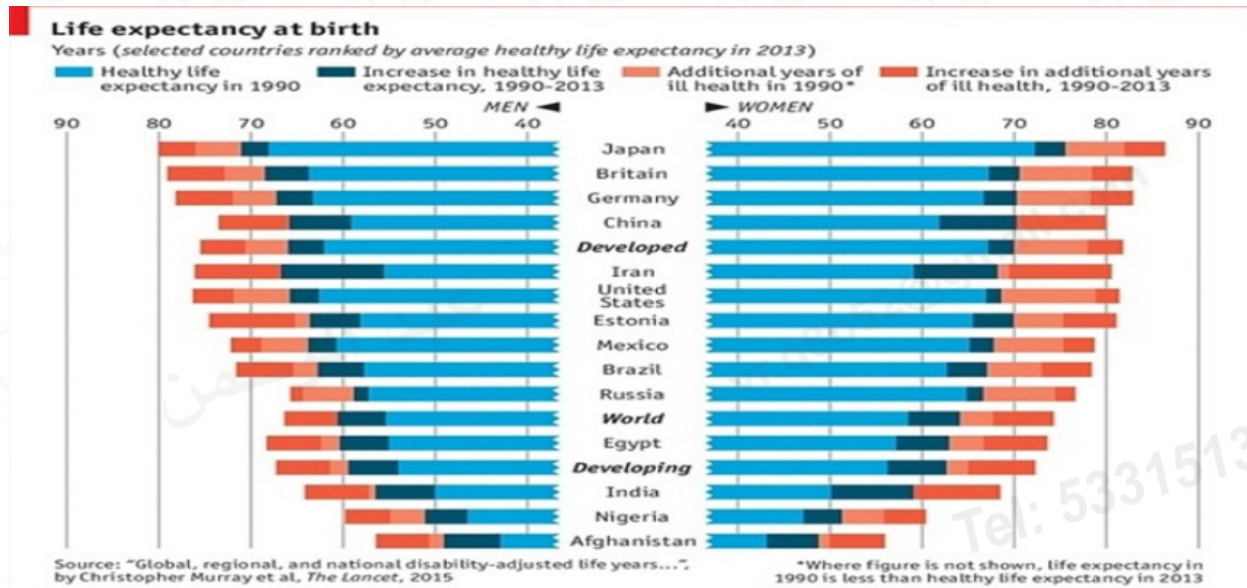
1 In which year was the freshwater level the highest in Morocco?

- A 1967
B 1997
C 2010
D 2011

2 How much did the freshwater levels decrease in Syria between 1967 and 2011?

- A about 800 cubic meters
B about 500 cubic meters
C about 400 cubic meters
D about 250 cubic meters

PASSAGE 100



1 What was the healthy life expectancy for men in Germany in 1990?

- A about 47 years
- B about 55 years
- C about 63 years
- D about 70 years

2 How much did women's healthy life expectancy increase in India from 1990-2013?

- A by about 4 years
- B by about 6 years
- C by about 7 years
- D by about 9 years