

ECAT Pre General Science English Chapter 8 Comprehension

Sr	Questions	Answers Choice
1	<p>The Baxter house is located at the end of the street. This house sits farther back from the curb than the other houses. It is almost difficult to see from the road without peering behind the deformed oak tree that has obscured it for years. Even so, the Baxter house stands out from the other houses on the street. It is tall and white. However, this white is no longer pristinely white, but a dingy grayish cream color. Long vines hang from the tattered roof. The Baxter house is two stories tall and has a large yard in the back that has never been mowed. The other houses on the street are a mere one story and have been painted a variety of colors. The newer, single story properties all appear to have been built around the same time; the yards mostly being of the same size, and the houses appearing to be clones of one another. Aside from the Baxter house at the end, this street is a perfect slice of middle America. The inhabitants of the other houses wonder who lives in the ancient, dilapidated house at the end of the street.</p> <p>This passage is best described as</p>	<p>A. Argumentative B. Descriptive C. Informative D. Persuasive</p>
2	<p>Next week I am on vacation. While I am on a vacation, I will work on two projects. First, I will fix the washing machine. The washing machine has been broken for two weeks. To fix it, I will need three tools: a screwdriver, a wrench, and a clamp. It will take one day to fix the washing machine. Next, I will fix our back porch. This is a bigger project. It will probably take about two days to fix the back porch, and will require a screwdriver, a hammer, nails, and a saw. My vacation starts on Monday. I have a lot of work to do, but hopefully I can relax after I finish my work.</p> <p>Question: The author of this passage can best be described as</p>	<p>A. interesting B. lazy C. constructive D. intelligent</p>
3	<p>The history of the modern world is a record of highly varied activity, of incessant change, and of astonishing achievement. The lives of men have, during the last few centuries, increasingly diversified, their powers have greatly multiplied, their powers have greatly multiplied, their horizon been enormously enlarged. New interests have arisen in rich profusion to absorb attention and to provoke exertion. New aspirations and new emotions have come to move the soul of men. Amid all the bewildering phenomena, interest, in particular, has stood out in clear and growing pre-eminence, has expressed itself in a multitude of ways and with an emphasis more and more pronounced, namely, the determination of the race to gain a larger measure of freedom than it has ever known before, freedom in the life of the intellect and spirit, freedom in the realm of government and law, freedom in the sphere of economic and social relationship. A passion that has prevailed so widely, that has transformed the world so greatly, and is still transforming it, is one that surely merits study and abundantly rewards it, its operations constitute the very pith and marrow of modern history.</p> <p>Not that this passion was unknown to the long ages that proceeded the modern periods. The ancient Hebrews, the ancient Greeks and Roman blazed the way leaving behind them a precious heritage of accomplishments and suggestions and the men who were responsible for the Renaissance of the fifteenth century and the Reformation of the sixteenth century contributed their imperishable part to this slow and difficult emancipation of the human race. But it is in modern times the pace and vigour, the scope and sweep of this liberal movement have so increased unquestionably as to dominate the age, particularly the last three centuries that have registered great triumphs of spirit.</p> <p>What has been the most dominant passion of the human race during the last three centuries?</p>	<p>A. Emancipation from economic exploitation B. Discovery of fresh fields and new pastures in the field of intellect C. Philosophical development D. Gaining freedom is different spheres of life</p>
	<p>Have you ever wondered what keeps a hot air balloon flying? The same principal that keeps food frozen in the open chest freezers at the grocery store allows hot air balloons to fly. It's very basic principle: Hot air rises and cold air falls. So while the super-cooled air in the grocery store freezer settles down around the food, the hot air in a hot air balloon pushes up, keeping the balloon floating above the ground. In order to understand more about how this principal works in hot air balloons, it helps to know more about hot air balloons themselves.</p> <p>A hot air balloon has three major parts: the basket, the burner, and the envelope. The basket is where passengers ride. The basket is usually made of</p>	

4

wicker. This ensures that it will be comfortable and add little extra weight. The burner is positioned above the passenger's heads and produced a huge flame to heat the air inside the envelope. The envelope is the colorful fabric balloon that holds the hot air. When the air inside the envelop is heated, the balloon rises.</div><div>The pilot can control the up-and-down movements of the hot air balloon by regulating the heat in the envelope. To ascend, the pilot heats the air in the envelope. When the pilot is ready to land, the air in the balloon is allowed to cool and the balloon becomes heavier than air. This make the balloon descend.</div><div>Before the balloon is launched, the pilot knows which way the wind is blowing. This means that she has a general idea about which wau the balloon will go. But, sometimes the pilot can actually control the direction that the balloon flies while in flight. This is because the air above the ground is sectioned into layers in which the direction of the wind may be different. So even though the pilot can't steer the balloon, she can fly higher or lower into a different layer of air. Some days the difference between the directions of the wind between layers is negligible. But other days the difference is so strong that it can actually push the balloon in a completely different directionIf the hot air balloon pilot wants to change directions during flight, what might he or she do to accomplish this?

- A. head toward a mountain peak
- B. wait for it to rain
- C. fly into a cloud
- D. fly higher

5

Where does chocolate come from? Believe it or not, it grows on trees. Not as a sweet chocolate candy bar wrapped in foil, but as a cocoa bean. These cocoa beans grow on a cacao tree, which is found in tropical areas such as Central and South America. The fruit of these are called pods, and they are long and hard. Inside the pods is a soft, white pulp that surrounds the thirty or so seeds. These seeds are what we call cocoa beans. They are very hard and bitter to the taste.To make chocolate, people start by carefully taking the beans out of the pods, still covered in the white pulp,and leaving them in a bucket. The bucket is often covered with banana leaves and left for anywhere from a few days to a few weeks. This process is called fermenting. Then he beans are left to dry in the sun. Fermenting and drying the beans makes them less bitter. Then the beans are shipped to a factory to be turned into chocolate.At the factory, beans are roasted in ovens to bring out their flavor. After roasting, the outer covering of the bean is removed. The inner bean is then crushed to form a paste known as chocolate liquor.From this paste,people can either make cocoa powder or the chocolate we buy in stores. To make cocoa powder,the paste is crushed and pressed repeatedly to remove the fat, leaving behind only a dry, ground powder. To make chocolate, people need to add other ingredients to the paste such as milk, sugar, and cocoa butter. They then mix and heat the concoction several times to create a substance we would recognize as chocolate. It may even have fruit, nuts, or candy added to it before it is molded into a shape.Considering all that must happen t turn a bitter cocoa bean into a chocolate bar,a dollar seems like a small price to pay for such a delicious sweet treat.

Question:

Which of the following best describes a 'concoction'?

- A. To make the smoothie, Daryl blended strawberries, bananas,yogurt,and juice
- B. When Jenna left the room, the pot of milk boiled for twenty minutes before boiling over
- C. A sprinkle of powdered sugar on top makes everything sweeter
- D. Elaine heated the lasagna, froze it, and then heated it again before serving it two weeks later

6

On January 3, 1961, nine days after Christmas, Richard Legg, John Byrnes, and Richard McKinley were killed in a remote desert in eastern Idaho. Their deaths occurred when a nuclear reactor exploded at a top-secret base in the National Reactor Testing Station (NRTS). Official reports state that the explosion and subsequent reactor meltdown resulted from the improper retraction of the control rod. When questioned about the events that occurred there, officials were very reticent. The whole affair, in fact, was discussed much, and seemed to disappear with time.

In order to grasp the mysterious nature of the NRTS catastrophe, it help to know a bit about how nuclear reactors work. After all, the generation of nuclear energy may strike many as an esoteric process. However, given its relative simplicity, the way in which the NRTS reactor functions is widely comprehensible. In this particular kind of reactor, a cluster of nine-ton uranium fuel rods are positioned lengthwise around a central control rod. The reaction begins with the slow removal of the control ro, which starts a controlled nuclear reaction and begins to heat the water in the reactor. This heat generates steam, which builds pressure inside the tank. As pressure builds, the steam looks for a place to escape. The only place this steam is able to escape is through the turbine. As it passes through the turbine on its way out of the tank, it turns the giant fan blades and produces energy.

On the morning of January 3, after the machine had been shut down for the holidays, the three men arrived at the station to restart the reactor. The control rod needed to be pulled out only four inches to be reconnected to the automated driver. However, records indicate that Byrnes yanked it out 23 inches, over five times the distance necessary. In milliseconds the reactor exploded. Legg was impaled on the ceiling; he would be discovered last. It took one week and a lead-shielded crane to remove his body. Even in full protective gear, workers were only able to work a minute at a time. The three men are buried in lead-lined coffins under concrete in New York, Michigan, and Arlington Cemetery, Virginia.

- A. I only
- B. I and II only
- C. II and III only
- D. I, II and III

The investigation took nearly two years to complete. Did Byrnes have a dark motive? Or was it simply an accident? Did he know how precarious the procedure was? Other operators were questioned as to whether they knew the consequences of pulling the control rod out so far. They responded "Of course! We often talked about what we would do if we were at a radar station and the Russians came.

"We'd yank it out."

Official reports are oddly ambiguous, but what they do not explain, gossip does. Rumors had it that there was tension between the men because Byrnes suspected the other two of being involved with his young wife. There is little doubt than he like

the other two of being involved with his young wife. There is little doubt that he, like the other operators, knew exactly what would happen when he yanked the control rod.

Which of the following literary techniques does the author use in the passage?

I hyperbole, characterized by the use of exaggeration for effect

II foreshadowing, characterized by the use of hints that depict future events in the narrative or story

III flashback, characterized by the description of a scene set in a time earlier than the main story

In the early 1920's, settlers came to Alaska looking for gold. They traveled by boat to the coastal towns of Seward and Knik, and from there by land into the gold fields. The trail they used to travel inland is known today as the Iditarod Trail, one of the National Historic Trails designated by the congress of the United States. The Iditarod Trail quickly became a major thoroughfare in Alaska, as the mail and supplies were carried across this trail. People also used it to get from place to place, including the priests, ministers, and judges who had to travel between villages down this trail was via god sled.

Once the gold rush ended, many gold-seekers went back to where they had come from, and suddenly there was much less travel on the Iditarod Trail. The introduction of the airplane in the late 1920's meant dog teams were mode of transportation, of course airplane carrying the mail and supplies, there was less need for land travel in general. The final blow to the use of the dog teams was the appearance of snowmoniles.

By the mid 1960's most Alasknas didn't even know the Iditarod Trail existed, or that dos teens had played a crucial role in Alaska's early settlements. Dorothy G.Page, a self-made historian, recognized how few people knew about the former use of sled dogs as working animals and about the Iditarod Trail's role in Alaska's colorful history. To she came up with the idea to have a god sled race over the Iditarod Trail. She presented her idea to an enthusiastic musher, as dog sled drivers are known, named Joe Redington, Sr. Soon the pages and the Redintons were working together to promote the idea of the Iditarod race.

Many people worked to make the first Iditarod Trail Sled Dog Race a reality in 1967. The Aurora Dog Mushers Club, along with men from the Adult Camp in Sutton, helped clear years of overgrowth from the first nine miles of the Iditarod Trail. To raise interest in the race, a \$25,000 purse was offered, with Joe Redington donating one acre of his land to help raise the funds. The short race, approximately 27 miles long, was put on a second time in 1969.

After these first two successful races, the goal was to lengthen the race a little further to the ghost town of Iditarod by 1973. However in 1972, the U.S. Army reopened the trail as a winter exercise, and so in 1973, the decision was made to take the race all the way to the city of Nome-over 1,000 miles. There were who believed it could bot be done and that it was crazy to send a bunch out into vast, uninhabited Alaskan wilderness. But the race went! 22 mushers finished that year, and to date over 400 people have completed it.

Based on information in the passage, it can be inferred that because the U.S. Army reopened the Iditarod Trail in 1972,

- A. More people could compete in the Iditarod race
- B. The mushers had to get permission from the U.S. Army to hold the race
- C. The Trail was cleared all the way to Nome
- D. The Iditarod race became a seasonal Army competition

Lilly loves her town. She loves the mall. She loves the parks. She also loves her school. Most of all, though, Lilly loves the seasons. In her old town, it was hot all of the time.

Sometimes it is cold in Lilly's new town. The cold season is in winter. Once in a while it snows. Lilly has never seen snow before. So far her, the snow is exciting as well as very beautiful. Lilly has to wear gloves to keep her hands warm. She also wear a scarf around her neck.

In spring, flowers bloom and the trees turn green with new leaves. Pollen falls on the cars and windowsills and makes Lilly sneeze. People work in their yards and mow their grass.

In summer, Lilly wears her old shorts and sandals- the same ones she used to wear in her old town. It is hot outside, and dogs lie in the shade. Lilly and her friends go to a pool or play in the water sprinkler. Her father cooks hamburgers on the grill for dinner.

Lilly's favorite season is autumn. In autumn, the leaves on the trees turn yellow, gold, red, and orange. Halloween comes in autumn, and this Lilly's favorite holiday. Every Halloween, Lilly wears a costume. Last year she wore a mouse costume. This year she will wear a fish costume.

- A. A princess costume
- B. A fairy costume
- C. A ghost costume
- D. A bird costume

One evening in autumn, Lilly and her mom are on sitting together on the porch. Mom tells Lilly that autumn is also called "fall". This is a good idea, Lilly thinks, because in the fall all of the leaves fall down from the trees.

Based on information in paragraph 5, which of the following costumes is Lilly most likely to wear next year?

This is the age of machine. Machines are everywhere, in the fields, in the factory, in the home, In the street, in the city, in the country, everywhere. To fly, it is not necessary to have wings; there are machines. To swim under the sea, it is not necessary to have gills; there are machines. To kill our fellowmen in over-whelming numbers, there are machines. Petrol machines alone provide ten times more power than all human beings in the world. In the busiest countries, each individual has six hundred human slaves in his machines.

- 9 What are the consequences of this abnormal power? Before the war, it looked as though it might be possible, for the first time in history to provide food and clothing and shelter for the teaming population of the world-every man, woman and child. This would have been the greatest triumphs of science. And yet, if you remember, we saw the world crammed, full of food and people hungry. Today, the leaders are bare and millions, starving. That's more begin to hum, are we going to see again more and more food, and people still hungry? For the goods, it makes the goods, but avoids the consequences.

A. Wings
B. Arms
C. Feet
D. Machines

According to the passage, which of the following is not necessary to fly?

Today, Mike and his mom are going to the library. Mike wants to find a book to read. His Mom wants to use a computer there. When they get ot the library. Mike finds a book about detectives. He also finds a book with chapters about a friendly ghost. Finally, he finds a book about a man who lives in the woods without food or water.He puts the books on the front desk and waits for his mom.Mike's mom sit at one of the computers in the library. She checks er email and looks at pictures of flowers on the internet. Then she reads a news article on a website. Mike's mom leaves the computer and walks over to Mike, holding up something out for him. Mike looks at her quizzically, It takes him a moment to recognize w that movie for us to watch tonight, " says Mike's mom"Sure,"Mike says, now holding the movie out in front of him. He reads the cover while walking back to the library entrance. He puts his books and the movie on the front desk to check out.A librarian stands behind the counter holding an electronic scanner. "How long can we keep them?"Mike asks her."Three weeks, "says the librarian."Cool,"says Mike.Suddenly, Mike is surprised. His mother is checking out something else that is too big to put on the desk. It's a picture of the ocean."What is that for?"Mike asks."To put on our wall at home, "says Mike's mom.:You can do that?"Mike asks.Mike's mom smiles at the librarian. "Yes, "she says, " but we have to return it in three months."Based on the books Mike finds to check out, we can tell that he is interested in

10

A. science
B. nature
C. mystery
D. adventure

Q.5 Recent advances in science and technology have made it possible for geneticists to find out abnormalities in the unborn foetus and take remedial action to rectify some defects which would otherwise prove to be fatal to the child Though genetic engineering is still at its infancy.scientist can now predict with greater accuracy a genetic disorder it is not yet an exact science since they are not in a position to predict when exactly a genetic disorder will set in While they have not yet been able to change the genetic order of the gene in germs they are optimistic and are holding out that in the near future they might be successful in achieving this feat they have however acquired the ability in manipulating tissue cells However genetic mis-information can sometimes be damaging for it may adversely affect people psychologically Genetic information may lead to tendency to brand some people as inferiors Genetic information can therefore be abused and its application in deciding the sex of the foetus and its subsequent abortion is now hotly debated on ethical lines but on this issue geneticists cannot be squarely blamed though this charge has often been leveled at them it is mainly a societal problem At present genetic engineering is a costly process of detecting disorders but scientists hope to reduce the costs when technology becomes more advanced this is why much progress in this area has been Possible in scientifically advanced and rich countries like the U.S.A U.K and japan it remains to be seen if in the future this science will lead to the development of a race of supermen on will be able to obliterate disease from this world.

11

A. Resignation
B. Cautious
C. Relief
D. Concert

o.What is the tone of the author in the last sentence of the passage

Many people like to eat pizza, but not everyone knows how to make it. Making the perfect pizza can be complicated, but there are lots of ways for you to make basic version at home.

When you make pizza, you must begin with the crust. The crust can be hard to make. If you want to make the crust yourself, you will have to make dough using flour, water, and yeast. You will have to knead the dough with your hands. If you do not have enough time to do this, you can use a prepared crust that you buy from the store.

After you have chosen your crust, you must then add the sauce. Making your own sauce from scratch can take a long time. You have to buy tomatoes, peel them, and then cook them with spices. If this sounds like too much work, you can also purchase jarred sauce from the store. Many jarred sauces taste almost as good as the kind you make at home.

12

A. Forget
B. Buy
C. Ask
D. Cook

Now that you have your crust and your sauce, you need to add the cheese. Cheese comes from milk, which comes from cows. Do you have a cow in your backyard? Do you how to milk the cow? Do you know how to turn that milk into cheese? If not, you might want to buy cheese from the grocery store instead of making it yourself. When you have the crust, sauce, and cheese ready, you can add other toppings. Some people like to put meat on their pizza, while other people like to add vegetables. Some people even like to add pineapple! The best part of making a pizza at home is that you can customize it by adding your own favorite ingredients

As used in paragraph 3, which is the best synonym for "purchase"?

The history of civilization shows how man always has to choose between making the right and wrong use of the discoveries science. This has never been more true than in our own age. In a brief period amazing discoveries have been made and applied to practical purpose.

13

It would be ungrateful not to recognize how immense are the boons which science has given to mankind. It has brought within the reach of multitudes benefits and advantages which only a short time ago were the privilege of the few. It has shown how malnutrition, hunger and disease can be overcome. It has not only lengthened life but it has depended its quality. Fields of the work of science the ordinary and fuller life than was ever possible to his grandparents.

- A. Malnutrition
- B. Disease
- C. Hunger
- D. All of these

Which of the following can be overcome with the help of science?

14

Where does chocolate come from? Believe it or not, it grows on trees. Not as a sweet chocolate candy bar wrapped in foil, but as a cocoa bean. These cocoa beans grow on a cacao tree, which is found in tropical areas such as Central and South America. The fruit of these are called pods, and they are long and hard. Inside the pods is a soft, white pulp that surrounds the thirty or so seeds. These seeds are what we call cocoa beans. They are very hard and bitter to the taste. To make chocolate, people start by carefully taking the beans out of the pods, still covered in the white pulp, and leaving them in a bucket. The bucket is often covered with banana leaves and left for anywhere from a few days to a few weeks. This process is called fermenting. Then the beans are left to dry in the sun. Fermenting and drying the beans makes them less bitter. Then the beans are shipped to a factory to be turned into chocolate. At the factory, beans are roasted in ovens to bring out their flavor. After roasting, the outer covering of the bean is removed. The inner bean is then crushed to form a paste known as chocolate liquor. From this paste, people can either make cocoa powder or the chocolate we buy in stores. To make cocoa powder, the paste is crushed and pressed repeatedly to remove the fat, leaving behind only a dry, ground powder. To make chocolate, people need to add other ingredients to the paste such as milk, sugar, and cocoa butter. They then mix and heat the concoction several times to create a substance we would recognize as chocolate. It may even have fruit, nuts, or candy added to it before it is molded into a shape. Considering all that must happen to turn a bitter cocoa bean into a chocolate bar, a dollar seems like a small price to pay for such a delicious sweet treat.

- A. leave them in a bucket
- B. roast them in an oven
- C. dry them in the sun
- D. ship them to the factory

Question:

To make chocolate, what is the first thing people must do to the cocoa beans?

15

Yellowstone National Park is the U.S. States of Wyoming, Idaho and Montana. It became the first National Park in 1872. There are geysers and hot springs at Yellowstone. There are also many animals at Yellowstone. There are elk, bison, sheep, grizzly, black bears, moose, coyotes, and more.

More than 3 million people visit Yellowstone National Park year. During the winter, visitors can ski or go snowmobiling there. There are also snow coaches that give tours. Visitors can see **steam** (vapor water) come from the geysers. During other seasons, visitors can go boating or fishing. People can ride horses there. There are nature trails and tours. Most visitors want to see Old Faithful, a very **predictable** geyser at Yellowstone. Visitors can check a schedule to see the exact time that Old Faithful is going to erupt. There are many other geysers and boiling springs in the area. Great Fountain Geyser erupts every 11 hours. Excelsior Geyser produces 4,000 gallons of **boiling** water each minute! Boiling water is 100 degrees Celsius, or 212 degrees Fahrenheit – that's very hot! People also like to see the Grand Prismatic Spring. It is the largest hot spring in the park. It has many beautiful colors. The beautiful colors are caused by **bacteria** in the water. These are forms of life that have only one cell. Different bacteria live in different water **temperatures**. Visiting Yellowstone National Park can be a week – long vacation or more. It is beautiful and there are activities for everyone.

- A. Sunlight
- B. Bacteria
- C. Eruptions
- D. Temperatures

What causes colors in the springs?

At the time Jane Austen's novels were published – between 1811 and 1818 – English literature was not part of any academic curriculum. In addition, fiction was under strenuous attack. Certain religious and political groups felt novels had the power to make so-called immoral characters so interesting that young readers would

power to make so-called immoral characters so interesting that young readers would identify with them; these groups also considered novels to be of little practical use. Even Coleridge, certainly no literary reactionary, spoke for many when he asserted that "novel-reading occasions the destruction of the mind's powers."

These attitudes towards novels help explain why Austen received little attention from early nineteenth-century literary critics. (In any case a novelist published anonymously, as Austen was, would not be likely to receive much critical attention.) The literary response that was accorded to her, however, was often as incisive as twentieth-century criticism. In his attack in 1816 on novelistic portrayals "outside of ordinary experience," for example. Scott made an insightful remark about the merits of Austen's fiction.

Her novels, wrote Scott, "present to the reader an accurate and exact picture of ordinary everyday people and places, reminiscent of seventeenth-century Flemish painting." Scott did not use the word 'realism', but he undoubtedly used a standard of realistic probability in judging novels. The critic Whately did not use the word 'realism', either, but he expressed agreement with Scott's evaluation, and went on to suggest the possibilities for moral instruction in what we have called Austen's 'realistic method' her characters, wrote Whately, are persuasive agents for moral truth since they are ordinary persons "so clearly evoked that we feel an interest in their fate as if it were our own." Moral instruction, explained Whately, is more likely to be effective when conveyed through recognizably human and interesting characters than when imparted by a sermonizing narrator. Whately especially praised Austen's ability to create character who "mingle goodness and villainy, weakness and virtue, as in life they are always mingled." Whately concluded his remarks by comparing Austen's art of characterization to Dickens', starting his preference for Austen's.

Yet, the response of nineteenth-century literary critics to Austen was not always so laudatory, and often anticipated the reservations of twentieth-century literary critics. An example of such a response was Lewes complaint in 1859 that Austen's range of subject and characters was too narrow. Praising her verisimilitude, Lewes added that, nonetheless her focus was too often only upon the unlofty and the commonplace. (Twentieth-century Marxists, on the other hand, were to complain about what they saw as her exclusive emphasis on a lofty upper middle class.) In any case having being rescued by literary critics from neglect and indeed gradually lionized by them, Austen steadily reached, by the mid-nineteenth century, the enviable pinnacle of being considered controversial.

The passage supplies information to suggest that the religious and political groups (mentioned in the third sentence) and Whately might have agreed that a novel.

- A. Has little practical use
- B. Has the ability to influence the moral values of its readers
- C. Is of utmost interest to readers when representing ordinary human characters
- D. Should not be read by young readers

On January 3, 1961, nine days after Christmas, Richard Legg, John Byrnes, and Richard McKinley were killed in a remote desert in eastern Idaho. Their deaths occurred when a nuclear reactor exploded at a top-secret base in the National Reactor Testing Station (NRTS). Official reports state that the explosion and subsequent reactor meltdown resulted from the improper retraction of the control rod. When questioned about the events that occurred there, officials were very reticent. The whole affair, in fact, was discussed much, and seemed to disappear with time.

In order to grasp the mysterious nature of the NRTS catastrophe, it help to know a bit about how nuclear reactors work. After all, the generation of nuclear energy may strike many as an esoteric process. However, given its relative simplicity, the way in which the NRTS reactor functions is widely comprehensible. In this particular kind of reactor, a cluster of nine-ton uranium fuel rods are positioned lengthwise around a central control rod. The reaction begins with the slow removal of the control rod, which starts a controlled nuclear reaction and begins to heat the water in the reactor. This heat generates steam, which builds pressure inside the tank. As pressure builds, the steam looks for a place to escape. The only place this steam is able to escape is through the turbine. As it passes through the turbine on its way out of the tank, it turns the giant fan blades and produces energy.

On the morning of January 3, after the machine had been shut down for the holidays, the three men arrived at the station to restart the reactor. The control rod needed to be pulled out only four inches to be reconnected to the automated driver. However, records indicate that Byrnes yanked it out 23 inches, over five times the distance necessary. In milliseconds the reactor exploded. Legg was impaled on the ceiling; he would be discovered last. It took one week and a lead-shielded crane to remove his body. Even in full protective gear, workers were only able to work a minute at a time. The three men are buried in lead-lined coffins under concrete in New York, Michigan, and Arlington Cemetery, Virginia.

The investigation took nearly two years to complete. Did Byrnes have a dark motive? Or was it simply an accident? Did he know how precarious the procedure was? Other operators were questioned as to whether they knew the consequences of

- A. Risky or dangerous
- B. Highly scientific
- C. Kept secret
- D. Understood by few

pulling the control rod out so far. They responded "Of course! We often talked about what we would do if we were at a radar station and the Russians came.

"We'd yank it out."

Official reports are oddly ambiguous, but what they do not explain, gossip does. Rumors had it that there was tension between the men because Byrnes suspected the other two of being involved with his young wife. There is little doubt that he, like the other operators, knew exactly what would happen when he yanked the control rod.

As used in paragraph 2, which is the best definition for esoteric?

The year 2006 was the golden anniversary, or the 50th birthday, of the Dwight D. Eisenhower National System of Interstate and Defense Highways. This system, usually referred to as The Interstate Highway System, is a system of freeways named after the U.S. President who supported it. The system is the largest highway system in the world, consisting of 46,876 miles (75,440 km) of freeways. The construction of the interstate highway system is an important part of American history. It has played a major role in **preserving** and maintaining the American way of life.

The interstate highway system has several major functions. One of its major functions is to **facilitate** the distribution of US goods. Because the interstate passes through many downtown areas, it plays an important role in the **distribution** of almost all goods in the United States. Nearly all products travel at least part of the way to their destination on the Interstate System. Another major function of the interstate is to facilitate military troop movement to and from airports, seaports, rail terminals and other military destinations. The Interstate highways are connected to route in the Strategic Highway Network, which is a system of highways that are **vital** to the U.S. Department of Defense.

Today, most of the Interstate system consists of newly constructed highways. The longest section of the Interstate system runs from Boston, Massachusetts to Seattle, Washington. It covers 3,020.54 miles. The shortest two-digit interstate is from Emery, North Carolina to Greensboro, North Carolina. It covers only 12.27 miles. All state capitals except five are served by the system. The five that are not directly served are Juneau, AK, Dover, DE, Jefferson City, MO, Carson City, NV, and Pierre, SD. The Interstate Highway System serves almost all major U.S. cities.

18

EACH Interstate highway is marked with a red, white, and blue shield with the word "Interstate," the name of the state, and the route number. Interstate highways are named with one or two-digit numbers. North-south highways are **designated** with odd numbers; east-west highways are named with even numbers. The north-south Interstate highways begin in the west with the lowest odd number; the east-west highways begin in the south with the lowest even numbers. There are mile markers at each mile of the interstate system, starting at the westernmost or southernmost point on the highway. Every Interstate highway begins with the number "0". Interchanges are numbered according to their location on the highway in relation to mileage; an exit between milepost 7 and milepost 8 would be designated "Exit 7." This system allows drivers estimate the distance to a desired exit, which a road is leading off the highway. Despite the common acceptance of the numbering system on the Interstate highways, some states have adopted different numbering systems. For example, a portion of the Interstate 19 in Arizona is measured in kilometers instead of miles since the highway goes south to Mexico.

Since the Interstate highways are freeways-highways that do not have signs and cross streets – they have the highest speed limits in the nation. Most interstate highways have speed limits between 65 – 75 miles per hour (105 – 120 kilometers per hour), but some areas in Texas and Utah have an 80 mile-per-hour (130 kilometer-per-hour) speed limit.

The federal government primarily funds interstate highways. However, they are owned and operated by the individual states or toll authorities in the states. The federal government generally funds up to 90% of the cost of an Interstate highway, while the states pay the remainder of the cost.

When you preserve something, you

- A. Keep and maintain it
- B. Uphold and exercise it
- C. Strengthen it
- D. Make it more pleasant

Q.5 Recent advances in science and technology have made it possible for geneticists to find out abnormalities in the unborn fetus and take remedial action to rectify some defects which would otherwise prove to be fatal to the child. Though genetic engineering is still at its infancy, scientists can now predict with greater accuracy a genetic disorder; it is not yet an exact science since they are not in a position to predict when exactly a genetic disorder will set in. While they have not yet been able to change the genetic order of the gene in germs, they are optimistic and are holding out that in the near future they might be successful in achieving this feat; they have however acquired the ability in manipulating tissue cells. However, genetic mis-information can sometimes be damaging for it may adversely affect

19

However genetic information can sometimes be damaging for it may adversely affect people psychologically Genetic information may lead to tendency to brand some people as inferiors Genetic information can therefore be abused and its application in deciding the sex of the foetus and its subsequent abortion is now hotly debated on ethical lines but on this issue geneticists cannot be squarely blamed though this charge has often been leveled at them it is mainly a societal problem At present genetic engineering is a costly process of detecting disorders but scientists hope to reduce the costs when technology becomes more advanced this is why much progress in this area has been Possible in scientifically advanced and rich countries like the U.S.A U.K and japan it remains to be seen if in the future this science will lead to the development of a race of supermen on will be able to obliterate disease from this world.

g. Which of the following is the same in meaning as the word feat as used in the passage

- A. Process
- B. Focus
- C. Fact
- D. Goal

20

The history of civilization shows how man always has to choose between making the right and wrong use of the discoveries science. This has never been more true than in our own age. In a brief period amazing discoveries have been made and applied to practical purpose.

It would be ungrateful not to recognized how immense are the boons which science has given to mankind. It has brought within the reach of multitudes benefits and advantages which only a short time ago were the privilege of the few. It has shown how malnutrition, hunger and disease can be overcome. It has not only lengthened life but it has depended its quality. Fields of the work of science the ordinary and fuller life than was ever possible to his grandparents.

Science provides a chance:

- A. Shorter and fuller life
- B. Longer and fuller life
- C. Longer and dull life
- D. None of these