# English ECAT Pre Engineering Online Test

| Sr | Questions | Answers Choice |
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| 1 | Fleas are perfectly designed by nature to feast on anything containing blood. Like a shark in the water or a wolf in the woods, fleas are ideally equipped to do what they do, making them very difficult to defeat. The bodies of these tiny parasites are extremely hardy and well-suited for their job.<br><br>A flea has a very hard exoskeleton, which means the body is covered by a tough, tile-like plate called a sclerite. Because of these plates, fleas are almost impossible to squish. The exoskeletons of fleas are also waterproof of fleas are also waterproof and shock resistant, and therefore fleas are highly resistant to the sprays and chemicals used to kill them.<br><br>Little spines are attached to his plate. The spine the flea scurries through an animal's fur in – search of grooming pet tries to pull a flea off through the hair coat, these spines will extend and stick to the fur like Velcro.<br><br>Fleas are some of the best jumpers in the natural world. A flea can jump seven inches, or 150 times its own length, either vertically or horizontally. An equivalent jump for a person would be 555 feet, the height of the Washington Monument. Fleas can jump 30,000 times in a row without stopping, and they are able to accelerate through the air at an incredibly high rate – a rate which is over ten times what humans can withstand in an airplane.<br><br>Fleas have very long rear legs with huge thigh muscles and multiple joints. When they get ready to jump. They fold their long legs up and crouch like a runner on a staring block. Several of their joints contain a protein called resilin, which helps catapult fleas into the air as they jump, similar to the way a rubber band provides momentum to a slingshot. Outward facing claws on the bottom of their legs grip anything they touch when they land.<br><br>The adult female flea mates after her first blood meal and begins producing eggs in just 1 to 2 days. One flea can lay up to 50 eggs in one day and over 2,000 in her lifetime. Flea eggs can be seen with the naked eye, but they are about the size of a grain of salt. Shortly after being laid, the eggs begin to transform into cocoons. In the cocoon state, fleas are fully developed adults, and will hatch immediately if conditions are favorable. Fleas can detect warmth, movement, and carbon dioxide in exhaled breath, and these three factors stimulate them to emerge as new adults. If the flea does not detect appropriate conditions, it can remain dormant in the cocoon state for extended periods. Under ideal conditions, the entire life cycle may only take 3 weeks, so in no time at all, pets and homes can become infested.<br><br>Because of these characteristics, fleas are intimidating opponents. The best way to control fleas, therefore, is to take steps to prevent an infestation from ever occurring.<br><br>It can be inferred that fleas will emerge from eggs as adults | A. When they outgrow the cocoon<br>B. After a period of 3 weeks<br>C. When they sense there is access to blood<br>D. If there is too much carbon dioxide in the cocoon |

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The author mentions the Washington Monument in order to

A. Estimate the extreme distance that a flea is able to jump
B. Illustrate a comparison made between fleas and humans
C. Clarify a point made regarding fleas and acceleration
D. Demonstrate the superiority of fleas over human

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Based on information in the passage, the reader can understand that

A. Fleas will die without access to blood
B. Fleas survive at a higher rate in outdoor habitats
C. Fleas will die after they produce 2,000 eggs
D. Newly hatched fleas are the size of a grain of salt

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4

According to the passage, fleas are able to jump

I with a high rate of acceleration

II up and down and from side to side

III because the blood they eat contains resilin

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

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A. Fleas extend their little spines if threatened
B. Fleas have the ability to jump higher than humans
C. Humans can jump higher if they consume foods containing resilin
D. The resilin found in fleas is used to make rubber bands

slingshot. Outward facing claws on the bottom of their legs grip anything they touch when they land.

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According to the passage, which of the following statements is true?

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Fleas are difficult to squish because they have

I Sclerites

II Tough spines

III Resilin in their joints

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7 According to the passage, fleas are resistant to sprays and chemicals because they

A. Have waterproof sclerites
B. Are excellent jumpers
C. Reproduce very rapidly
D. Can stick to fur like Velcro

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8

A. Concerned
B. Passionate
C. Informative
D. Opinionated

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The author's tone in the passage is best described as

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The primary purpose of the passage is to

A. Educate the reader about the physical characteristics of fleas
B. Compare fleas to other members of the animal kingdom
C. Relate the problems that can result from a flea infestation
D. Explain why a flea infestation is hard to get rid of

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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.

10

A. Levels of heat and cold
B. Amounts of water
C. Levels of rainfall
D. Colors of water

Different temperatures are different