SAMPLE TEST QUESTIONS

This section provides sample test questions for the Reading, Mathematics, and Writing sections of the THEA Test. After you read each question, write down your answer and check it using the answer key. As you review your correct and incorrect responses, note which THEA Test skills you may need to study further.

SAMPLE READING QUESTIONS

Read the selection below; then answer the six questions that follow.

Hibernating Bears: Metabolic Marvels

1. The North American black bear (*Ursus americanus*) hibernates for more than a third of the year—sometimes for as long as five months. During this period of relative dormancy, the bear is self-sufficient, requiring nothing from the outside. It does not eat or drink, nor does it eliminate body wastes. Waste products that in other animals (including humans) would rapidly elevate to lethal levels in the blood are broken down into basic chemicals and then recycled as new proteins. And by burning its fat stores (accumulated during a late-summer feeding frenzy), the bear produces—internally—all the water it needs.

2. Scientists do not know what causes a bear to start the late-summer eating binge that allows it to hibernate all winter. During the late summer, bears may spend up to 20 hours a day eating almost anything that is readily available, including garbage. The normal caloric intake of an adult bear is about 4,000 calories a day. During the late-summer feeding frenzy, however, this figure climbs to 20,000 calories a day—five times the normal intake. By the time the bear has finished feasting, it will have added five inches of fat to its body—a layer thick enough to sustain it during hibernation.

3. Exactly what initiates the release of the “hibernation induction trigger” is also still a mystery. Current studies suggest that it may be the shortage of food that does it, rather than the coming of cooler weather or the shortened day. At some point in the fall the amount of easily obtainable food drops drastically. When this happens, the energy the bear would have to expend looking for food is greater than the food energy it is likely to find.

4. Their feasting finally ended, black bears start out for their wintering areas. Once there, some go to sleep in hollow logs, others curl up in abandoned tunnels, and still others build a kind of bird’s nest and bed down right out in the open. In Minnesota, bears bedding down in the open often experience temperatures as low as 40 degrees below zero. Eventually they become covered with layers of snow.

5. Female black bears usually give birth to cubs in January, midway through hibernation. During the delivery, the female only briefly rouses from sleep. The cubs, born blind, find their way to the mother’s nipples by sensing heat. Sometimes, female black bears with cubs are even discovered hibernating in open nests, their offspring snuggled in the warm curl of the mother’s body.
While other hibernating animals (ground squirrels, various bats, and woodchucks, for example) show an enormous drop in heart rate and body temperature, the physiological changes exhibited by hibernating bears are far less dramatic. A ground squirrel’s heart rate falls from 350 beats per minute to as low as 2. Its core body temperature drops 64 degrees, from 98 to 34. On the other hand, a black bear’s normal sleeping heart rate of 40 beats per minute might drop to 8, and its normal body temperature of about 100 degrees does not fall below 91 degrees. Also, the small hibernators are slow to wake up, while a hibernating black bear can awake to full alertness in seconds and become extremely dangerous.

Currently, the black bear’s hibernation process is being studied by a number of researchers, including wildlife biologists, physiologists, and biochemists. By understanding the bear’s amazingly efficient metabolism, scientists hope one day to find new treatments for human ailments such as kidney failure and bone disease.

1. Which of the following details best illustrates the author’s view that bears have a very efficient way of maintaining their body functions?

A. By burning its fat stores during hibernation, the bear produces—internally—all the water it needs.

B. During the late-summer feeding frenzy, the caloric intake of bears rises from 4,000 to 20,000 calories a day.

C. By the time a bear has finished its late-summer feasting, it will have added five inches of fat to its body.

D. A bear’s normal body temperature of about 100 degrees does not fall below 91 degrees during hibernation.

2. Which of the following best describes the author’s purpose for writing this selection?

A. to review the current state of knowledge regarding black bears’ hibernation

B. to compare the physiological changes experienced by smaller and larger hibernating animals

C. to explain important causes and effects of hibernation among black bears

D. to demonstrate how humans may benefit from a fuller understanding of the bear’s hibernation process
3. Based on the information included in the selection, the author most likely would agree with which of the following statements?

A. Humans are less self-sufficient than most other forms of animal life.

B. By learning more about the world around them, humans will come to know more about themselves.

C. The causes of some natural phenomena will always remain beyond human understanding.

D. The amount of rest required by an organism is determined primarily by the amount of food it consumes.

4. In paragraph 6, the author compares the hibernation processes of bears and squirrels. The author uses this comparison to:

A. explain why researchers are interested in the hibernation process of bears.

B. demonstrate the physiological deficiencies of small animals.

C. illustrate unique features of the hibernation process of bears.

D. suggest physiological similarities between bears and other types of animals.
5. Which of the following best organizes the major topics addressed in this selection?

A.  
   I. The self-sufficiency of hibernating bears  
   II. Processes involved in giving birth during hibernation  
   III. Physiological changes in hibernating animals  

B.  
   I. Waste elimination and caloric intake in hibernating bears  
   II. Operation of the “hibernation induction trigger”  
   III. The hibernation process in small versus large animals  

C.  
   I. The late-summer feeding frenzy of bears  
   II. The bedding down process of hibernating bears  
   III. The metabolic efficiency of hibernating bears  

D.  
   I. Hibernation and how bears prepare for it  
   II. Noteworthy characteristics of bears’ hibernation  
   III. Physiological changes in bears versus other hibernating animals  

6. Which of the following is the best meaning of the word *elevate* as it is used in the first paragraph of the selection?

A. advance  

B. increase  

C. become prominent  

D. lift
## Answer Key and Skills Measured

<table>
<thead>
<tr>
<th>Question Number</th>
<th>Correct Response</th>
<th>Skill Measured</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reading Section</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>A</td>
<td>Understand the main idea and supporting details in written material.</td>
</tr>
<tr>
<td>2</td>
<td>A</td>
<td>Identify a writer's purpose, point of view, and intended meaning.</td>
</tr>
<tr>
<td>3</td>
<td>B</td>
<td>Analyze the relationship among ideas in written material.</td>
</tr>
<tr>
<td>4</td>
<td>C</td>
<td>Use critical reasoning skills to evaluate written material.</td>
</tr>
<tr>
<td>5</td>
<td>D</td>
<td>Apply study skills to reading assignments.</td>
</tr>
<tr>
<td>6</td>
<td>B</td>
<td>Determine the meaning of words and phrases.</td>
</tr>
<tr>
<td><strong>Mathematics Section</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>D</td>
<td>Solve problems involving data interpretation and analysis.</td>
</tr>
<tr>
<td>8</td>
<td>D</td>
<td>Solve problems involving data interpretation and analysis.</td>
</tr>
<tr>
<td>9</td>
<td>A</td>
<td>Graph numbers or number relationships.</td>
</tr>
<tr>
<td>10</td>
<td>D</td>
<td>Solve word problems involving one and two variables.</td>
</tr>
<tr>
<td>11</td>
<td>D</td>
<td>Understand operations with algebraic expressions and functional notation.</td>
</tr>
<tr>
<td>12</td>
<td>B</td>
<td>Solve applied problems involving a combination of mathematical skills.</td>
</tr>
<tr>
<td>13</td>
<td>D</td>
<td>Solve problems involving geometric figures.</td>
</tr>
<tr>
<td><strong>Writing Section—Multiple-Choice Questions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>B</td>
<td>Recognize edited American English usage.</td>
</tr>
<tr>
<td>15</td>
<td>C</td>
<td>Recognize unity, focus, and development in writing.</td>
</tr>
<tr>
<td>16</td>
<td>B</td>
<td>Recognize purpose and audience.</td>
</tr>
</tbody>
</table>