

## Reading Comprehension for Government Exams - Sample Questions

**Passage 1:** All of the cells in a particular plant start out with the same complement of genes. How then can these cells differentiate and form structures as different as roots, stems, leaves, and fruits? The answer is that only a small subset of the genes in a particular kind of cell are expressed, or turned on, at a given time. This is accomplished by a complex system of chemical messengers that in plants include hormones and other regulatory molecules. Five major hormones have been identified: auxin, abscisic acid, cytokinin, ethylene, and gibberellin. Studies of plants have now identified a new class of regulatory molecules called oligosaccharins.

Unlike the oligosaccharins, the five well-known plant hormones are pleiotropic rather than specific; that is, each has more than one effect on the growth and development of plants. The five has so many **simultaneous** effects that they are not very useful in artificially controlling the growth of crops. Auxin, for instance, stimulates the rate of cell elongation, causes shoots to grow up and roots to grow down, and inhibits the growth of lateral shoots. Auxin also causes the plant to develop a vascular system, to form lateral roots, and to produce ethylene.

The pleiotropy of the five well-studied plant hormones is somewhat analogous to that of certain hormones in animal. For example, hormones from the hypothalamus in the brain stimulate the anterior lobe of the pituitary gland to synthesize and release many different hormones, one of which stimulates the release of hormones from the adrenal cortex. These hormones have specific effects on target organs all over the body. One hormone stimulates the thyroid gland, for example, another the ovarian follicle cells, and so forth. In other words, there is a hierarchy of hormones. Such a hierarchy may also exist in plants. Oligosaccharins are fragments of the cell wall released by enzymes: different enzymes release different oligosaccharins. There are indications that pleiotropic plant hormones may actually function by activating the enzymes that release these other, more specific chemical messengers from the cell wall.

**Q 1.** Which of the given below is not a major hormone?

1. Auxin
2. Abscisic acid
3. Cytokinin
4. Ethylene
5. Lateral Roots

**Answer: (5) Lateral Roots**

**Q 2.** Which of the following hormone is responsible for “stimulating the rate of cell elongation”?

1. Auxin
2. Abscisic acid
3. Gibberellin

4. Cytokinin
5. Ethylene

**Answer: (1) Auxin**

**Q 3.** Which of the following is not a function performed by Auxin?

1. Causes shoots to grow up and roots to grow down
2. Inhibits the growth of lateral shoots
3. Causes the plant to develop a vascular system
4. All of the Above
5. None of the Above

**Answer: (4) All of the Above**

**Q 4.** Which of the following is the most opposite in meaning to the word “**simultaneous**” marked in bold in the passage?

1. Concurrent
2. Synchronous
3. Asynchronous
4. Coexistent
5. Synchronised

**Answer: (3) Asynchronous**

**Passage 2:** A meteor stream is composed of dust particles that have been ejected from a parent comet at a variety of velocities. These particles follow the same orbit as the parent comet, but due to their differing velocities they slowly gain on or fall behind the disintegrating comet until a shroud of dust surrounds the entire cometary orbit. Astronomers have hypothesized that a meteor stream should broaden with time as the dust particles’ individual orbits are perturbed by planetary gravitational fields.

A recent computer-modeling experiment tested this hypothesis by tracking the influence of planetary gravitation over a projected 5,000-year period on the positions of a group of hypothetical dust particles. In the model, the particles were randomly distributed throughout a computer simulation of the orbit of an actual meteor stream, the Geminid. The researcher found, as expected, that the computer-model stream broadened with time. Conventional theories, however, predicted that the distribution of particles would be increasingly dense toward the center of a meteor stream. Surprisingly, the computer-model meteor stream gradually came to resemble a thick-walled, hollow pipe.

Whenever the Earth passes through a meteor stream, a meteor shower occurs. Moving at a little over 1,500,000 miles per day around its orbit, the Earth would take, on average, just over a day to cross the hollow computer-model Geminid stream if the stream were 5,000 years old. Two brief periods of peak meteor activity during the shower would be observed, one as the Earth entered the thick-walled “pipe” and one as it exited. There is no reason why the Earth should always pass through the stream’s exact center, so the time interval between the two bursts of activity would vary from one year to the next. Has

the predicted twin-peaked activity been observed for the actual yearly Geminid meteor shower? The Geminid data between 1970 and 1979 show just such a bifurcation, a secondary burst of meteor activity being clearly visible at an average of 19 horse (1,200,000 miles) after the first burst.

The time intervals between the bursts suggest the actual Geminid stream is about 3,000 years old.

**Q 1.** When does the meteor shower occur?

1. Once every year
2. Whenever Earth passes through a meteor stream
3. After every 5,000 years
4. Every night
5. Every leap year

**Answer: (2) Whenever Earth passes through a meteor stream**

**Q 2.** A recent computer-modelling experiment tested this hypothesis by tracking the influence of planetary gravitation over a projected \_\_\_\_\_ year period on the positions of a group of hypothetical dust particles.

1. 4,500
2. 5,000
3. 1,50,000
4. 4,200
5. 3,000

**Answer: (2) 5,000**

**Q 3.** What does the time intervals between the bursts suggest about the actual Geminid stream?

1. It is 3,000 years old
2. It does not exist
3. It is 1,500,000 years old
4. It is not an astronomical analysis
5. None of the Above

**Answer: (1) It is 3,000 years old**

Given below are a few other links which will help you ace the English Language section:

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| <a href="#">Tenses Rules</a>                   | <a href="#">Preposition Rules</a>       | <a href="#">Conjunction Rules</a>                     |
| <a href="#">Letter Writing Format</a>          | <a href="#">Idioms and Phrases</a>      | <a href="#">How To Prepare Vocabulary for Bank PO</a> |
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