

**Question 1. Halley observed one transit of the planet Venus.**

**Passage:** *But there was a problem: transits of Venus, unlike those of Mercury, are rare, occurring in pairs roughly eight years apart every hundred or so years. Nevertheless, he accurately predicted that Venus would cross the face of the Sun in both 1761 and 1769 - though he didn't survive to see either.*

**Question 2. Le Gentil managed to observe a second Venus transit.**

**Passage:** *Undaunted, he remained south of the equator, keeping himself busy by studying the islands of Mauritius and Madagascar before setting off to observe the next transit in the Philippines. Ironically after traveling nearly 50,000 kilometers, his view was clouded out at the last moment, a very disappointing experience.*

**Question 3. The shape of Venus appears distorted when it starts to pass in front of the Sun.**

**Passage:** *When Venus begins to cross the Sun's disc, it looks smeared not circular - which makes it difficult to establish timings. This is due to*

*diffraction of light. The second problem is that Venus exhibits a halo of light when it is seen just outside the Sun's disc.*

**Question 4. Early astronomers suspected that the atmosphere on Venus was toxic.**

**Passage:** *This is due to diffraction of light. The second problem is that Venus exhibits a halo of light when it is seen just outside the Sun's disc. While this showed astronomers that Venus was surrounded by a thick layer of gasses refracting sunlight around it, both effects made it impossible to obtain accurate timings.*

**Question 5. The parallax principle allows astronomers to work out how far distant stars are from the Earth..**

**Passage:** *The AU is a cosmic measuring rod, and the basis of how we scale the Universe today The parallax principle can be extended to measure the distances to the stars. If we look at a star in January - when Earth is at one point in its orbit - it will seem to be in a different position from where it*

*appears six months later. Knowing the width of Earth's orbit, the parallax shift lets astronomers calculate the distance.*

**Question 6. Exposure to different events forces the brain to think differently.**

**Passage:** *The best way to see things differently to other people is to bombard the brain with things it has never encountered before. Novelty releases the perceptual process from the chains of past experience and forces the brain to make new judgments*

**Question 7. Iconoclasts are unusually receptive to new experiences.**

**Passage:** *Successful iconoclasts have an extraordinary willingness to be exposed to what is fresh and different. Observation of iconoclasts shows that they embrace novelty while most people avoid things that are different.*

**Question 8. Most people are too shy to try different things.**

**Passage:** *These may seem like trivial phobias. But fear of public speaking, which everyone must do from time to time, afflicts one-third of the population. This makes it too common to be considered a mental disorder. It is simply a common variant of human nature, one which iconoclasts do not let inhibit their reactions*

**Question 9.** **If you think in an iconoclastic way, you can easily overcome fear.**

**Passage:** *There are many types of fear, but the two that inhibit iconoclastic thinking and people generally find difficult to deal with are fear of uncertainty and fear of public ridicule.*

**Question 10.** **When concern about embarrassment matters less, other fears become irrelevant.**

**Passage:** *Fear is a major impediment to thinking like an iconoclast and stops the average person in his tracks. There are many types of fear, but the two that inhibit iconoclastic thinking and people generally find difficult to deal*

*with are fear of uncertainty and fear of public ridicule. These may seem like trivial phobias.*

**Question 11. Fear of public speaking is a psychological illness.**

**Passage:** *But fear of public speaking, which everyone must do from time to time, afflicts one-third of the population. This makes it too common to be considered a mental disorder. It is simply a common variant of human nature, one which iconoclasts do not let inhibit their reactions*