

# Science and Hope of Survival

## Questions and answers for class 10

---

1. Why were the technical experts summoned by the three superpowers?

OR

Why was Keilis-Borok summoned to the Geneva conference?

Answer:

The three nuclear powers were willing to come to an agreement on putting a ban on the nuclear weapon test. But the problem was how to detect if there was a violation of the agreement. Hence the experts were summoned to Geneva to solve the problem.

2. Make a list of lessons that the writer learnt at the Geneva Summit.

Answer:

- a) There were people all over the world who thought and interacted the way he did.
- b) It was not necessary for him to feel lonely abroad.
- c) While there is science, there is hope of survival.

3. Why does Keilis-Borok feel that science is the indispensable guardian and caretaker of humanity?

Answer: Keilis-Borok feels that only the basic research in science can create a springboard for developing new disaster-preparedness industry. If science is humanly used, it is their indispensable guardian and caretaker. Presently the safety of mankind is threatened by both natural and man-made disasters. Scientific solutions are the only hope.

4. Pursuit of science is an exciting adventure. Explain.

Answer: Everybody could agree that the pursuit of Science is really an exciting adventure. When compared to other types of adventure like Sports, Art, Music, whatever may be the field, Science needs determination perseverance and hard work. In all the fields especially in the science field, the major reward comes from the discovery itself.

5. What was the 'problem' that the nuclear powers had faced?

Answer: The nuclear powers had to free both the problems. All nations were not ready to believe the other nations. They had the threat if any country could violate and if they violate how could it be detected.

6. How are scientists able to work in spite of political and cultural differences?

Answer: The scientists are able to work in spite of political and cultural differences because they are able to work out a common language, based on respect to hard evidence, undisputable ranking only by expertise, and persistent self-criticism.

7. Scientists are the most practical people in the world. Justify.

Answer: Scientists are the most practical people in the world. This could be seen in new technologies, new brands of the industry from defence to entertainment. The scientist invented antibiotics, electronics, biotechnology, synthetic fibres, the green revolution, and genetic forensic diagnosis, etc.

8. Who will be headhunted by financial institutions and pharmaceutical industries? Why?

Answer: People trained in theoretical Physics are headhunted by financial institutions and those trained in frontiers of biological research become founders and directors in the pharmaceutical industry for their knowledge of basic science.

9. In which area did Kellis Brooks theoretical knowledge has a direct application?

Answer: Keilis-Borok was doing research on the theory of seismic waves. Nuclear explosions produced earth tremors very similar to those generated by earthquakes, it turned out that his knowledge of seismic waves had a direct application in the field of nuclear weapons or underground nuclear explosions.

10. Which are the natural and man-made disasters that threaten our civilization?

OR

What are the commonly recognized threats for the survival of our civilization?

Answer: The very survival of our civilization is threatened by natural and man-made disasters. Among them are earthquakes, destruction of megacities, environmental catastrophes, economic and social crises.

11. What reward do the scientists get? How are they different from lawyers, doctors and businessmen?

Answer: The discovery itself is the reward of the scientists. The scientists get lesser money than the lawyers, doctors and businessmen. But they enjoy freedom, camaraderie and independence.

12. Which are the two factors that cause Earth tremors?

Answer: The earth tremors are caused by two factors: 1. By the seismic waves during the earthquake. 2. By the underground nuclear explosion.

13. What was the important decision taken by the politicians before the Geneva Summit? How does it help for the survival of humanity?

Answer: The important decision taken by the politicians before the Geneva Summit was the Ban on nuclear weapon test. This would a hope for the survival of humanity as there will be no competition for developing nuclear weapons.

14. Who can best ensure our safety in the world and how?

Answer: The scientists with their tools that are up to the challenge can ensure our safety in the world.