

## **Thematic** Questions and **Summary** Writing

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*Internationally accredited space scientist and former Indian president, widely known as Missile Man of India* **Dr Avul Pakir Jainulabdeen Abdul Kalam** (1931-2015) addressed the delegates of the Space Summit on January 4, 2003 designed as part of the 90th Indian Science Congress, which is organized by ISRO and Bangalore University. In the special session, the President delivered his lecture entitled "Vision for the Global Space Community: Prosperous Happy and Secure Planet Earth". The lecture encompassed aspects related to growth of technologies and human impact, society and economic growth, transformation of the human society into a knowledge-based society, environment, ecology, water and mineral resources, as the world moves to a knowledge-based society and, finally, ensuring a prosperous, happy and secure planet earth. He also unveiled issues like dynamics of terrorism and energy water needs for the future generations, etc. He laid the emphasis for river networking in Indian sub-continent to solve the problem of drought and floods. He further highlighted how space technology could be used as a powerful tool for achieving his vision of a prosperous, happy and secure planet earth.

***In the speech*** Mr. Kalam specially emphasized a very important aspect of mankind's future energy crisis. He pointed out that the era of wood and biomass has almost come to an end. The age of oil and natural gas would soon be over within the next few decades. Massive burning of world's coal reserves may lead to a worldwide ecological disaster because coal burning emits the highest amount of carbon in the atmosphere. Ukraine's (former Soviet Union) Chernobyl disaster in 1986 has exposed that nuclear energy can be potentially dangerous too. So according to Kalam, the only solution that mankind can look to is the massive use of solar energy in future because it has some advantages over other forms of renewable energies.

**Now** why has Kalam put so much importance to the issue of energy? The energy sources have always been a major factor of change throughout history. The world's petroleum consumption has increased from annually 3 billion barrels in 1930 to annually 50 billion barrels today. In the next quarter century, the world's population is expected to be about 8 billion which is 30 percent higher than today. Developing countries will grow their economies about two times faster than industrialized countries. Global economic growth is expected to continue at 3 percent per year. Consequently, the global demand for energy will grow at about 1.7 percent per year on an average. It

indicates a 50 percent rise of energy consumption by 2030. If the world's daily petroleum consumption is 220 million barrels now, it will rise to 335 million barrels by that time. The present reserve of hydro-carbon energy resources is limited and it will not be sufficient to meet the future energy challenges of the world. The bottom line of Kalam's speech indicates that concern of mankind in the 21st the century.

**Mr Kalam** also talked about water for future generations. More than 70% of earth surface is having water; but only one percent is available as fresh water for drinking purposes. Currently, more than half of the world's six billion population is without access to safe drinking water and sanitation. Twenty thousand children are dying every day due to polluted drinking water more than the total mortality due to cancer, aids, wars and accidents. By the year 2025 when the world population touches eight billion, as many as seven billion will be living under conditions moderate, high and extreme water scarcity. There is a four-fold path towards safe, fresh drinking water. The first is to re-distribute water supply; the second is to seek new sources; the third is to save and reduce demand for water; and the fourth is to recycle used water supplies. And hence, leading industrial countries have taken initiatives to tap alternative energy sources mainly known as green or renewable energy sources.

## Answer the following questions:

- a.** What is the passage about?
- b.** Describe the relation among population, development and growth according to the passage.
- c.** What is the scientist Kalam worried about?
- d.** “Massive burning of world’s coal reserves may lead to a worldwide ecological disaster because coal burning emits the highest amount of carbon in the atmosphere.” Do you support this view? Explain why/ why not.
- e.** What do you mean by the potential danger of nuclear energy?
- f.** What according to Mr Kalam is the solution of future energy crisis?
- g.** Why do you think people should look for renewal energy? Justify your answer.
- h.** What did Mr Kalam suggest about water for future generations?
- i.** What knowledge have you had about green energy?
- j.** Suggest a suitable title of the passage.

**Write a summary of the passage within 100 words.**