

# **INSTITUTE OF INFRASTRUCTURE, TECHNOLOGY, RESEARCH AND MANAGEMENT**

## **INVITED TALK (2017-18)**

**Speaker:** Dr. A. K. A. Rathi, Former Professor CEPT University, Former Director (Environment) & Chief Technical Advisor to Government of Gujarat

**Title:** Challenges for Engineers

**Date:** 04/10/17

### **Bio-sketch of Dr. A. K. A. Rathi**

Dr. Rathi completed his B.E (Honours) from BITS Pilani in 1971 in Chemical Engineering and Masters in Chemical Engineering from IISC Bangalore in 1973. He completed his PhD from M. S University in 2000. He has more than 30 years of experience working with Industries and Government of Gujarat in the areas of pollution control, environmental assessment and management, environmental infrastructure, waste water treatment, etc. He has been associated with various universities as Visiting Professor/ Professor since 2002. He is former Professor CEPT University, Former Director (Environment) & Chief Technical Advisor to Government of Gujarat. He is currently Independent Director on the Board of IG Petrochemicals Ltd, Visiting Professor at L. D Engineering College and Ahmedabad University. He also works as an Environmental consultant.

### **Abstract of the Invited Talk**

The various global issues which needs attention of engineers are growth of population, depletion of national resources, increasing urbanization, climate change and industrialization. Increase in population requires more land, more water, more food production, more use of fertilizers and pesticides; resulting in deforestation and soil degradation, water shortage and deterioration in water quality. Climate changes may lead to sea level rise by 0.5m and increase in temperature by 5.8<sup>0</sup>C by year 2100. It also results in erratic rainfall pattern, more incidences of floods/droughts and migration of people. Industrialization has resulted in almost more than 1,00,000 chemicals released to environment, which were unknown earlier. These issues needs to be tackled by engineers and may be converted to opportunities by engineers. These issues can be tackled by innovation in technology, reducing wastage, shifting towards sustainable development by more recycling and reuse of materials for various applications and focusing towards economic development with inclusive social development. Engineers should have the attitude explained by a famous Japanese proverb “If one can do, you can do; if no one can do, you must do”.