



BHARATHIDASAN UNIVERSITY

**Tiruchirappalli- 620024,
Tamil Nadu, India**

Programme: M.A. History (Integrated)

**Course Title : Science, Technology
and Society**

Course Code : NMEC02

Unit-IV

Science and Rationalism

Dr. Y. Srinivasa Rao

Associate Professor

Department of History

Human as discoverer and inventor



- Inbuilt power of comprehension by humans and their confrontation with nature and surroundings transform them into inventors and discoverers
- Every human in the process of survival becomes, generator of ideas, producer of techniques and tools
- though inventive traditions of using material varies from civilisation to civilisation, there is visible commonality
- Necessity-leads to the generation of idea-achieving the ends means takes the physical shape



- Idea is science- technique is technology and these two are for society.
- Neither science of scientist nor the technology of the technologist is independent of society
- Without society, science and technology would not exist and without science and technology society would not have forwarded.
- Human's in their struggle to survive, generated science and technology



- Hunter gathering-tools and techniques of hunting, caves making and primitive tools
- Emergence of hunter gathering society-trail and error-collection and selection of plant species
- Acquiring knowledge on material in the nature
- Agriculture- science of reproduction
- Enclosures and domestication of animals
- Wars, towns, international trade
- military technology, maritime technology and architecture in the ancient and medieval times



- Wind mill and water wheel- food processing technology in the medieval Europe
- Hand pounding and traditional water lifting systems in India
- Gender, muscularity and techniques
- Trade guilds (black smiths) and social segregation
- Expansion of urban areas and development of food processing industry
- Science and religion



- Rationality and realism and challenge to the religion
- Secularisation and rationalisation of society
- Automatisation and mechanisation of production
- Capitalism, imperialism, colonialism and S&T
- Scientific revolution-challenge to medieval world view
- Theories of inner universe and outer universe-and resulted conflicts
- Industrial revolution-steam engine-western mode of production