

HISTORY OF SCIENCE AND TECHNOLOGY FROM 1900 C.E. TO 2005 C.E.

Semester	Subject code	Category	Lecture		Theory		Practical	Credits
			Week Hr	Total Hr/sem	Week Hr	Total Hr/sem		
VI	21CHI6D	Elective III	5	75	5	75	-	3

COURSE OBJECTIVES:

- To Enable the Students to know the Development of Science and Technology in India during the 20th Centuries.
- To gain knowledge of space Research of India.
- To know various Transport Systems, Industries and IITS in our country.

COURSE OUTCOMES:

On the successful Completion of the course, students will be able to

CO Number	Co Statement	Knowledge Level
CO1	Understand the Promotion of Science after Independence.	K1, K2
CO2	Know the Development of Agriculture and Progress of Irrigation.	K1, K2
CO3	Know the Development of Road, Water and Space transportation.	K1, K2
CO4	Acquire knowledge of Industries and Information Technology.	K1, K2
CO5	Know the Execution of Government Policies for the Development of Science and Technology.	K1, K2

(Knowledge Level: K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze)

MAPPING WITH PROGRAM OUTCOMES:

COS	PO1	PO2	PO3	PO4	PO5
CO1	M	S	M	S	M
CO2	S	M	M	M	S
CO3	M	S	M	S	M
CO4	M	S	S	M	M
CO5	S	M	M	M	S

(S –Strong M – Medium L –low)

UNIT: I **15 Hours**

Scientific and Technology in India: Asiatic society of Bengal - William Jones - Scientific and Technology in India- Space Exploration – Science Academies - Indian Government Policies for the promotion of Science Scientific Policy Resolution 1958 – 1983 - 2013 –Key Points of 12th Five Year Plan 2012.

UNIT: II **15 Hours**

Nuclear Technology, Space Science and Technology: Nuclear Technology - Energy Policy – Nuclear Industrial Development –Indian Atomic Energy Commission – Nuclear Power Plant in India– Ocean Technology Groups – Operational Programmes – National Institute of Oceanography - Nanotechnology – Fundamental Concept - Research and Development - Biotechnology – History and Developments - Space Science and Technology – Institutions – Administration – Functions - Communication Technology – Career Programs

UNIT: III **15 Hours**

E-Infrastructure in India: – E-Government in India – E Service in India – Cybercrime – Cybersecurity – kind of Cyber Attacks – Role of Government – Legal Issue - Managing Cyber Security – Science and Technology Policy in India, Nuclear and Space Research Centers of India – Goals and Objectives - launch Vehicle fleet – Satellite Programme – Explorations – Future Projects - Development of Space Research — Artificial Satellite – kinds of Satellite - Space Stations.

UNIT: IV **15 Hours**

The Great Scientists in India: C V Raman – Visvesvaraya –Hatyendra Nath Bose - Homi J. Baba – Srinivasa Ramanujam – Jagadish Chandra Bose - Vikram Sarabai – Har Gobind Khorana - A.P.J Abdul Kalam - Department of Science and Technology- Reasons for Backwardness of Science in India – IITS in India.

UNIT: V **15 Hours**

Impact of Science and Technology: Telegraph and Telephones – Radio -Television —Internet - WIFI – Bluetooth - Energy - Types of Energy - Advantages and Disadvantage in Science.

Distribution of Marks: Theory: 100%

Teaching Methodology

- Class Room Teaching\Online Teaching.
- Assignments\Off Line Teaching.
- Discussions
- Home test
- PPT Presentations

TEXT BOOKS AND REFERENCES

S.no	Authors	Title	Publishers	Year
1.	Spectrum book Editorial team	Developments in Science and Technology	Spectrum, Delhi.	2018
2.	O.P Jeggi	History of Science and Technology	Kabir Publishers	2012
3.	Sundar	Teaching and Learning Through Information and Communication Technology	Sarup Book Publishers pvt. Ltd. New Delhi	2011.
4.	Roy Macheod and Depak Kumar	Technology and Technical Transfers to India, 1700 - 1947.	Ganga Publications	2005
5.	G. Kuppuram and K. Kumudamani	History of Science and Technology in India,	Kosala Publishing House	2000
6.	S. Varghese Jayarajm	History of Science and Technology	Chand and Chand Publishers	2000
7.	Roy Macheod and Depak Kumar	Technology and Western technology and Technical Transfers to India.	Sterling Publishers Private Ltd., New Delhi	1999
8.	S.P. Gupta,	Modern India and Progress in Science and Technology	Himalaya Publication	1999
9.	D.D. Chattopadhyaya	Studies in the History of Science in India	Chand Publishing House, New Delhi.	1989
10.	Dr. R. Venkatraman	History of Science and Technology	Deepam Publications	1989

WEB SOURCES

1. <https://www.microlit.com/10-organizations-promoting-scientific-research-in-india/>
2. https://en.wikipedia.org/wiki/Irrigation_in_India
3. <http://www.yourarticlelibrary.com/essay/industrial-development-in-india-essay/35203>
4. <https://www.thecitizen.in/index.php/en/NewsDetail/index/12/17105/Why-India-is-not-Developed-as-a-great-scientific-power>
5. https://www.tutorialspoint.com/fundamentals_of_science_and_technology/role_of_science_and_technology_in_ <https://en.wikipedia.org/>
6. https://en.wikipedia.org/wiki/Indian_Institutes_of_Technology https://en.wikipedia.org/wiki/National_Institute_of_Ocean_Technology

Name of the Syllabus Designer:

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