



PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

Class: B. A. Part I Semester –I (Choice Based Credit System)

Science Technology and Development

Paper:-I (INTRODUCTION TO S.T. D.)

(W. E. F. JUNE 2022)

Code No. Course No.:

No. of Credit: 04

Total Lectures: 60

Total Marks: 50

Objectives:

- Provide knowledge to students about the development of science and technology and contribution of some eminent scientist.
- To make acquainted the student with the dynamic aspects of development of science and technology

Topic No.	Name of the Topic	Details	No. of Lectures
1.	Introduction of Science and Technology	1.1) Science and Technology – Definition, Nature and Scope. 1.2) Fundamental concepts in scientific thinking. 1.3) Scientific Methodology of Study. 1.4) Science and superstitions. 1.5) Scientific approach and social development.	15
2.	Science and Technology and Development	2.1) A brief survey of development of Science and Technology 2.2) Life sketches and scientific contribution of Bhaskaracharya, Dr. Jagdishchandra Basu, Dr. Homi Bhabha, Dr. A.P.J. Abdul Kalam, Albert Einstein, Dr. Jayant Narlikar & Dr. C. V. Raman	15
3.	Solar System and Our Earth	3.1) Solar System - Position of the Earth 3.2) Origin of the Earth	15

		3.3) Interior of the Earth 3.4) Forces acting on the Earth Endogenic and Exogenic Forces 3.5) Earthquakes: Causes, Effect and Preventive Measures.	
4.	Resources	4.1) Resources: Concept, Classification and Conservation 4.2) Conventional power resources: Coal, Petroleum, Natural Gas, Hydal Power. 4.3) Non- Conventional power Resources: Solar Energy, Wind and Atomic energy.	15

References:

- Dury G.H. (1980) : The Face of the Earth, Penguins.
- Ernst W.G. (2000) : Earth System – Process and Issues, Cambridge University press.
- Encyclopedia of Science and Technology, Dreamland Publication
- ICSSR (1983) : A Survey of Research in Physical Geography, Concept, New Delhi.
- Kale V. and Gupta (2001) : An Element of Geomorphology, Oxford Uni. Press Calcutta.
- Monkhouse F.J. (1974) : Principles of Physical Geography, Hodder and Stoughton, London
- Singh Savindar (1988) :Geomorphology, PrayagPustakalata, Allahabad. 8. Ministry if Home affairs, Govt. of India 2015.
- प्रा. के. ए. खतीब- प्राकृतीकभूगोल, संजोगप्रकाशनकोल्हापूर

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

Class: B. A. Part I Semester –II (Choice Based Credit System)

Science Technology and Development

Paper: II (APPLICATION OF S.T. D.)

(W. E. F. JUNE 2022)

Code No. Course No.:

No. of Credit:04

Total Lectures:60

Total Marks:50

Objectives:

- To understand the scope and content of S.T.D. in relation to agriculture, transportation, pollution and communication etc.
- Provide knowledge to students about the importance of resources, human health and contribution of various scientific research institutes in India.

Topic No.	Name of the Topic	Details	No. of Lectures
1.	Science Technology and Agriculture	1.1) Science and Technological Advances in agriculture such as Irrigation, Fertilizers, High Yielding Variety Seeds, plant protection methods. 1.2) Green Revolution 1.3) Bio-technology in agriculture, Tissue culture and cloning. 1.4) Problems of Modern agriculture and their solutions.	15
2.	Science Technology and Human Health	2.1) Brief history of Medical Science with special reference to India. 2.2) Nutrition – Concept, components; Balanced diet. 2.3) Disease – A brief study of AIDS and cancer - causes, effects and preventive measures.	15
3.	Science Technological Institutions in India	3.1) Bhabha Atomic Research Centre -Mumbai 3.2) Indian Institution of Space Science and Technology-Thiruvananthapuram. 3.3) Indian Agricultural Research Institute-New Delhi. 3.4) National Institute of Oceanography-Panjim. 3.5) Survey of India – Dehradun	15
4.	A) Communication	4.1) Means of Communication and their application: Telephone, Television, Internet Mobile etc. 4.2) Computer – Generation and application 4.3) Introduction of Remote Sensing, GIS and GPS	15
	B) Pollution	4.4) Pollution - Air Pollution, Water Pollution, Sound and Soil Pollution – causes, effect and their measures.	

References:

- Wooldridge S.W. The Geographer as Scientist, Thomas Nelson and Sons ltd. London, 1956
- Strahler A.N. : Environmental Geo-Science, Hamilton Pub., Santa Barbara, 1973.
- Louise Simmers, Introduction to Health Science technology
- च.म .साखळकर- अंतराळज्ञेप
- यदुनाथथत्ते- भारतीयअणुयुगाचेशिल्पकार
- रॉस (अनुवादित)- विज्ञानाचेविश्व
- आ. वा. कोगेकर- विज्ञानाचीवाटचाल
- डेव्हिडवूडबरी- (अनुवादित) अवकाशयात्रा
- अ. भी. शहा- शास्त्रीयविचारपध्दती
- भालबाकेळकर- अर्वाचीनभारतीयवैज्ञानिक
- सुधाकरभालेराव- कृत्रिमउपग्रह व अवकाशविज्ञान
- इंद्रभूषणबडे अॅलर्जीसमज व गैरसमज
- डॉ. ए.पी.जे. अब्दुलकलाम- अग्नीपंख

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Equivalent Subject for Old Syllabus

B.A. Part – I STD (CBCS Pattern) w.e.f. 2022

Sr. No.	Paper No. & Name of the Old Paper (Pattern 2019)	Paper No. & Name of the New Paper (Pattern 2022)
1	PAPER I - INTRODUCTION TO S.T. D.	PAPER I - INTRODUCTION TO S.T. D.
2	PAPER II - APPLICATION OF S.T. D.	PAPER II - APPLICATION OF S.T. D.