SARDAR VALLABHBHAI PATEL EDUCATION SOCIETY'S
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An Autonomous Institute u/s UGC Act 1956
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Program Name: Integrated M.Sc. (IT)
Level: Post Graduate
Branch: Information Technology
Subject Code : 2BS107
Subject Name : Indian Knowledge Systems-I

w. e. f. Academic Year:	2025-26
Semester:	1st
Category of the Course:	Value Added Course

Prerequisite:	Familiarity with Indian civilization and history, Sanskrit terms, basic binary concepts, mathematical thinking and logical reasoning.
Rationale:	This course covers basic information about The Vedic Corpus, Ancient Indian Number Systems and Units of Measurement, and Mathematics in context of Indian Knowledge System.

Course Outcome:

After Completion of the Course, Student will able to:

No	Course Outcomes
01	Identify and discuss salient features of IKS.
02	Explain the origin and significance of the Vedas.
03	Identify the development of number systems in ancient India with reference to historical and archaeological evidence.
04	Discuss the historical development and foundational principles of Indian mathematics.

Teaching and Examination Scheme:

Teaching Scheme (in Hours)			Total Credits L+T+ (PR/2)	Assessment Pattern and Marks				Total Marks
L	T	PR	C	Theory		Tutorial / Practical		
				SEE (TH)	IAT	CCE	SEE (P)	
2	0	0	2	25	25	-	-	50

Where SEE: Semester End Examination, IAT: Internal Assessment Test, CCE: Continuous and Comprehensive Evaluation

Course Content:

Unit No.	Content	No. of Hours	% of Weightage
1.	**Unit 1: Indian Knowledge System – An Introduction** 1.1 What is IKS? 1.2 Why do we need IKS? 1.3 Organization of IKS 1.4 Historicity of IKS 1.5 Some salient aspects of IKS	3	10
2.	**Unit 2: The Vedic Corpus** 2.1 Introduction to Vedas 2.2 A synopsis of the four Vedas 2.3 Sub-classification of Vedas 2.4 Messages in Vedas 2.5 Introduction to Vedāṅgas 2.6 Prologue on Śikṣā and Vyākaraṇa 2.7 Basics of Nirukta and Chandas 2.8 Introduction to Kalpa and Jyotiṣa 2.9 Vedic Life: A Distinctive Features	9	30
3.	**Unit 3: Number Systems and Units of Measurement** 3.1 Number systems in India – Historical evidence 3.2 Salient aspects of Indian Mathematics 3.3 Bhūta-Saṃkhyā system 3.4 Kaṭapayādi system 3.5 Measurements for time, distance, and weight 3.6 Piṅgala and the binary system	9	30
4.	**Unit 4: Mathematics** 4.1 Introduction to Indian Mathematics 4.2 Unique aspects of Indian Mathematics 4.3 Indian Mathematicians and their Contributions 4.4 Algebra 4.5 Geometry 4.6 Trigonometry 4.7 Binary mathematics and combinatorial problems in Chandaḥ Śāstra 4.8 Magic squares in India	9	30
	Total	**30**	**100**

Suggested Specification Table with Marks(%) (Theory):

Distribution of Theory Marks(%)					
R Level	**U Level**	**A Level**	**N Level**	**E Level**	**C Level**
50	**50**	**-**	**-**	**-**	**-**

Where R: Remember; U: Understanding; A: Application, N: Analyze and E: Evaluate C: Create (as per Revised Bloom's Taxonomy)

References/Suggested Learning Resources:

(a) Books:

1. Introduction to Indian Knowledge System: Concepts and Applications, PHI Learning Private Ltd. Delhi.
2. Pride of India: A Glimpse into India's Scientific Heritage, Samskrita Bharati, New Delhi.
3. The Wonder that is Sanskrit, Sri Aurobindo Society, Puducherry.
4. Public Administration in Ancient India, Macmillan, London.
6. Indian Knowledge Systems Vol – I & II, Indian Institute of Advanced Study, Shimla, H.P

(b) Open source software and website:

1. https://onlinecourses.swayam2.ac.in/imb24_mg21
2. https://onlinecourses.swayam2.ac.in/imb24_mg22

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