

Subject

“INDIAN KNOWLEDGE SYSTEMS”

Subject Code:BIKK609

Faculty: . Dr Hussana Johar R B

01 Credits

50-CIE marks

50-SEE Marks

Course Objectives

1 To facilitate the students with the concepts of Indian traditional knowledge and to make them understand the Importance of roots of knowledge system.

2 To make the students understand the traditional knowledge and analyze it and apply it to their day-to-day life.

Course Outcomes (Course Skill Set)

Course Outcomes: After completing the course, the students will be able to

CO1: Provide an overview of the concept of the Indian Knowledge System and its importance.

CO2: Appreciate the need and importance of protecting traditional knowledge.

CO3: Recognize the relevance of Traditional knowledge in different domains.

CO4: Establish the significance of Indian Knowledge systems in the contemporary world.

Module - 1

Introduction to Indian Knowledge Systems (IKS): Overview, Vedic Corpus, Philosophy, Character scope and importance, traditional knowledge vis-a-vis indigenous knowledge, traditional knowledge vs. western knowledge.

INTRODUCTION TO THE TITLE

- IKS is generic phrase that covers practically everything about India.
- We have recorded history, abundant culture, literature and social and community practices defining what Indian knowledge.
- Knowledge assets available in India from the prehistoric times to the current day will all qualify to be part of the IKS.
- The term IKS has three words in it:
Indian Knowledge System

INTRODUCTION TO THE TITLE

Indian- By this term, we mean the indigenous sources of knowledge generated by Indian society. The term 'Indian' points to the undivided Indian subcontinent (Akhand Bharata).

The name 'India' has its roots in 'Indus,' the Sanskrit term 'Sindhu,' referring to the mighty river that traversed this ancient land. The Greeks and Iranians adapted it as 'Hindos' or 'Indos,' signifying the region east of the Indus River. Notably, the name 'Bharat' also played a role.

INTRODUCTION TO THE TITLE

- "Bhārat" gained popularity in India during the nineteenth century. It is the shortened form of the term "Bhāratavarṣa" which is extensively used in the literature of the [native religions](#). "Bhāratavarṣa" is derived from the name of the [Vedic](#) tribe of [Bharatas](#) who are mentioned in the [Rigveda](#) as one of the principal peoples of [Aryavarta](#) (the part of the Indian subcontinent settled by [Aryans](#)). At first the name Bhāratavarṣa referred only to the western part of the [Gangetic Valley](#),^{[1][2]} In 1949, it was adopted as an official name for the [Republic of India](#) by the [Constituent Assembly](#) along with "India".
- "Hindustān" is another common name for the [Republic of India](#) and is also derived from the name of the river Indus. It gained popularity in India in the 11th century in Islamic literature and became the common name for the [northern Indian subcontinent](#) in Indian languages, though it has been in Persian usage since at least the 3rd century CE while its earlier form "Hindush" was used as early as 6th century BCE. The term 'Hindu' was the [Old Persian](#) adaption of "Sindhu" (another name for the river Indus). "Hindustan" is still commonly used in the subcontinent to refer to the modern day [Republic of India](#) by [Hindustani](#) speakers.

INTRODUCTION TO THE TITLE

- Knowledge- It is obtained by the insights gained by personal experiences with life situations, facing problems and coming up with means of solving them. Knowledge may or may not be converted to a literary format. The tacit knowledge can be preserved and transmitted through an oral tradition without loss.
- System- Means a structured methodology and a classification scheme to access the available corpus (कोष) of knowledge.

An overview on IKS

- The Indian Knowledge System (IKS) is a holistic approach to knowledge transmission deeply rooted in ancient Vedic literature, encompassing various disciplines like philosophy, science, mathematics, astronomy, medicine, and arts, all intertwined with a focus on "Jnan" (knowledge), "Vignan" (science), and "Jeevan Darshan" (philosophy of life), which evolved through observation, experimentation, and practical application across different aspects of life, significantly impacting Indian society and culture today; key texts include the Vedas and Upanishads, and the National Education Policy (NEP) 2020 emphasizes integrating IKS into modern education.

Introduction to Indian Knowledge Systems (IKS):

Why do we need Indian Knowledge System?

- It is about protecting revised wisdom (सशोधत ज्ञान), economic security and national pride.
- IKS is not about merely knowing about some ancestral (पैतृक) knowledge.
- India has a long surviving civilizational history to at least 5000-8000 year back.
- There is an impression that all knowledge that we benefit from has originated from west. (This is not true)

Introduction to Indian Knowledge Systems (IKS):

Why do we need Indian Knowledge System?

Indians were extraordinary in steel making until the 17th century. The Indian 'wootz' steel was used to manufacture what was famously known as 'Damascus blades'.

- Due to major changes in the educational system in India introduced about 200 years back, there was a rather abrupt (आकस्मिक) end to the process of knowledge transmission.

Why Indian Knowledge Systems (IKS) for Engineering students?

- ***Pride in Cultural Heritage:***

Introducing young people to Indian knowledge systems instills a sense of pride and appreciation for their cultural heritage. India boasts of diversity of traditions, philosophies, and practices that have endured for centuries, reflecting the country's rich cultural diversity. By learning about ancient Indian texts such as the Vedas, Upanishads, and epics like the Mahabharata and Ramayana, young learners gain insight into the profound wisdom and intellectual achievements of their ancestors.

- ***Solving Modern-Day Problems:***

Indian knowledge systems offers valuable insights that can address contemporary challenges in various domains. From sustainable agriculture practices advocated in ancient texts like the Artha shastra to the holistic healthcare system of Ayurveda, these traditions offer solutions that are both time-tested and environmentally sustainable. By integrating traditional knowledge with modern science and technology, young people can contribute to innovative solutions for pressing issues such as climate change, healthcare, and sustainable development.

Why Indian Knowledge Systems (IKS) for Engineering students?

- ***Holistic Pedagogy:***

The pedagogical approach of Indian knowledge systems is inherently interesting and holistic, engaging learners on multiple levels. Rather than rote memorization, these systems emphasize experiential learning, critical thinking, and the cultivation of practical skills. Through storytelling, debates, and interactive discussions, students are encouraged to explore complex ideas and develop a deeper understanding of themselves and the world around them. A great change in the current educational process where children are feeling stressed out can be brought when traditional pedagogy is used.

- ***Value-Based Education:***

Indian knowledge systems are deeply rooted in values such as compassion, respect for nature, and the pursuit of truth and righteousness. By imparting these values, education based on Indian knowledge systems nurtures ethical leadership, empathy, and social responsibility in young learners. This value-based approach not only fosters personal growth but also contributes to the development of a more compassionate and sustainable society.

Why Indian Knowledge Systems (IKS) for Engineering students?

- *Connecting to local culture*

One of the strengths of Indian knowledge systems lies in their ability to connect learners to their local culture and knowledge. By exploring regional customs, folklore, and indigenous practices, students develop a deeper appreciation for their cultural identity and heritage. This connection to local traditions fosters a sense of belonging and community, empowering young people to become stewards of their cultural legacy.

- *Neuroscientific benefits:*

Recent research in neuroscience has underscored the cognitive benefits of engaging with Indian knowledge systems. Practices such as yoga, meditation, and chanting have been shown to enhance cognitive function, reduce stress, and improve emotional well-being. By incorporating these practices into education, young learners can develop greater focus, resilience, and emotional intelligence, enhancing their overall learning experience and academic performance.

Mathematics (Ganitha)

Observational and Experiential:

Ganita, rooted in ancient Indian texts like the Sulabha Sutras and the works of mathematicians like Aryabhata and Brahmagupta, emphasizes intuitive problem-solving, geometric reasoning, and practical applications. Unlike modern mathematics, which often focuses on abstract concepts and formal proofs, Ganita encourages students to explore mathematical ideas through concrete examples and real-world contexts, fostering creativity and critical thinking skills. By integrating Ganita with modern math curricula, students gain a deeper understanding of mathematical principles while also appreciating the cultural and historical significance of mathematical knowledge, thereby enriching their overall mathematical education.

Ayurveda and Yoga

Incorporating Ayurveda and Yoga into education not only offers holistic health benefits but also fosters a deeper connection with nature. Ayurveda, the ancient Indian system of medicine, emphasizes the interconnectedness of body, mind, and spirit, and advocates for harmony with nature. By learning about Ayurvedic principles such as the importance of seasonal rhythms, the healing properties of herbs and plants, and the balance of the doshas (body energies), young people gain a profound appreciation for the natural world and their place within it.

Ayurveda and Yoga

Similarly, Yoga, an integral part of Indian knowledge systems, offers practices that promote physical well-being, mental clarity, and spiritual growth. Through yoga asanas (postures), pranayama (breath control), and meditation, individuals cultivate a deeper awareness of their bodies, minds, and surroundings. By practicing yoga outdoors or in natural settings, students experience a profound sense of connection with the elements, fostering a reverence for the Earth and its ecosystems.

In addition to Ayurveda and Yoga, incorporating knowledge of the local calendar and observational Indian astronomy into education is crucial for fostering a deeper connection with nature and understanding the rhythms of the cosmos.

Cosmos

The local calendar, often based on lunar and solar cycles and agricultural seasons, provides valuable insights into the cyclical patterns of nature, including the timing of festivals, agricultural activities, and celestial events.

By familiarizing themselves with the local calendar, children gain a deeper appreciation for the interconnectedness of human life with natural phenomena, fostering a sense of reverence and respect for the Earth's cycles. Furthermore, exposure to observational Indian astronomy, which emphasizes direct observation of celestial bodies and phenomena, offers students a hands-on approach to understanding the universe. By studying the movements of the sun, moon, and stars, children develop observational skills, critical thinking, and a sense of wonder about the mysteries of the cosmos, laying the foundation for a lifelong curiosity about the natural world and their place within it.

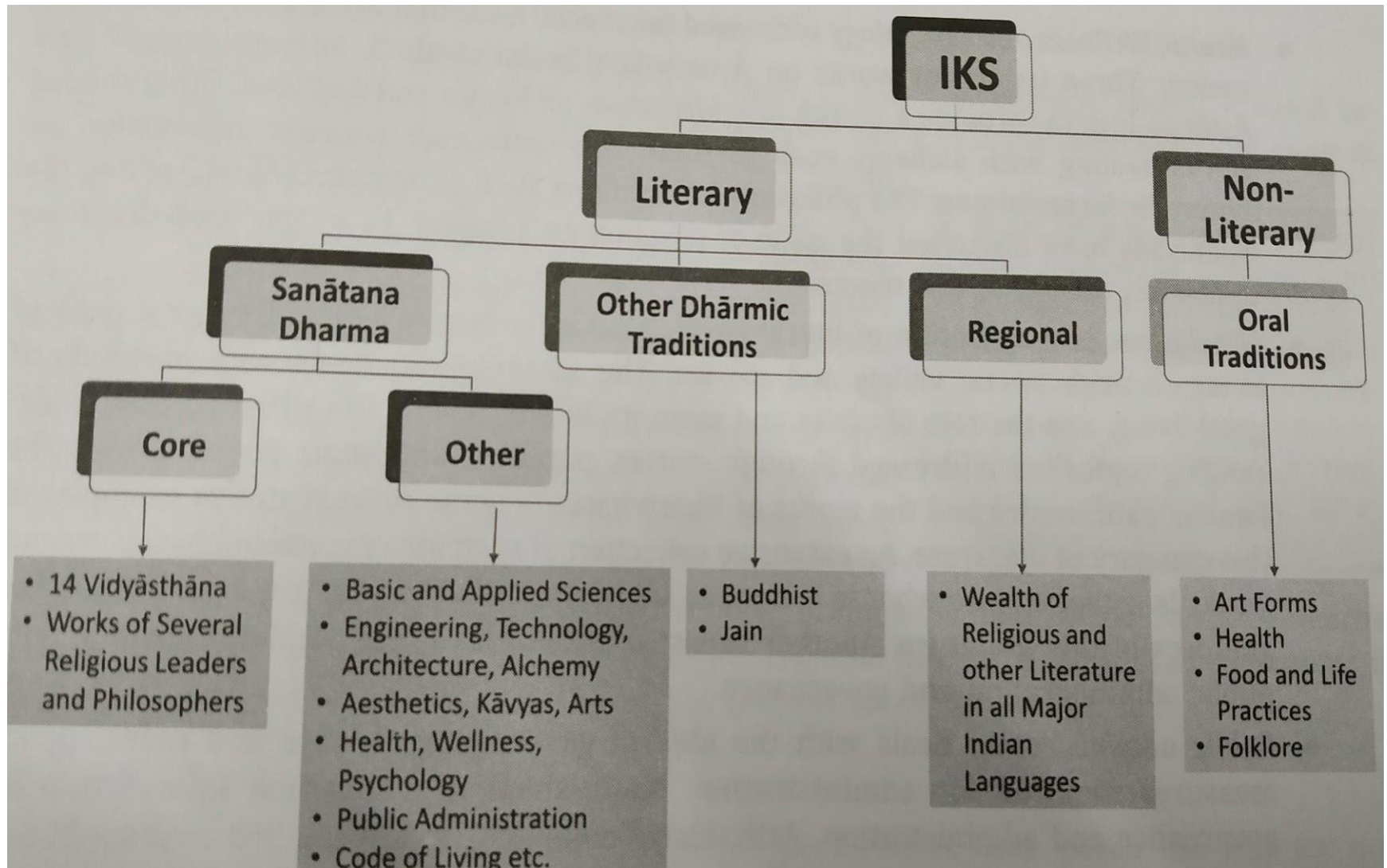
Importance of Indian knowledge system

- Ancient (प्रिचीन) knowledge is the accrued knowledge over several generations and preserved in formal and informal means.
- Formal means include documented knowledge and informal means include several values and practices through oral traditions.
- Ancient knowledge provides a head start to society to march on the highway of innovation and new knowledge creation.

Importance of Indian knowledge system

1. Identity- It defines the context for several aspects of the day to day living of every individual.
2. Culture- It is the manifestation (अभिव्यस्तत) of human intellectual achievement regarded collectively by society over time.
3. Received Wisdom- Innovation and new knowledge creation for the society.
4. Economic Value- Transforming knowledge into economic values for the benefit of the country

The IKS Corpus- A Classification Framework



The IKS Corpus- A Classification Framework

- There are many ways to define and identify what constitutes IKS.
- Ex:-
 - One approach to merely pick the important topics representatively of knowledge corpus such as Vedas, Yoga, Vastu, Silpa Sastras, Ayurveda, Buddhism and Jainism to define IKS.
 - Another approach is to select phrases such as Indian psychology, Indian arts, dance, architecture and put together related works into it to construct IKS.
 - NOTE:- These examples bring out the components of IKS.

The IKS Corpus- A Classification Framework

- The usefulness of a classification framework depends on three factors: **Completeness, Compactness and inter-connectedness.**
 - **Completeness** assures that all important components of IKS are included in the proposed framework.
 - **Compactness** indicates the efficacy (प्रभाव) of the grouping of various topics in IKS in logical manner.
 - **Inter-connectedness** brings logical relationship among the various sub- classifications.

The IKS Corpus- A Classification Framework

- Closer scrutiny of IKS knowledge repository provides us following details:
 - The knowledge is available in both formal literary sources and informal literary source.
 - Among the literature sources, we can identify three categories
 - I. Vedic and allied literature
 - II. Other Dharmic Traditions
 - III. Regional
 - The non literary sources is available through a rich set of oral traditions found throughout the country.

Sanatana Dharma- Core Literature

1. This comprises a vast repository of knowledge with the Vedas, Known as Sruti.
2. Although the Vedic corpus is oral in nature and still transmitted using oral methods.
3. The Vedas are considered foundational by the Indian society.

The other literature consists of works that addressed key issues of day to day life such as health, wellness, science, engineering, technology that aided societal progress of development and art forms.

This category covers several areas:

- Basic and Applied Science
- Engineering, Technology & Architecture
- Health, Wellness, Psychology
- Public Administration
- Code of living

Other Dharmic Traditions & Regional Literature

Other dharmic traditions have stayed out of the Vedic framework but have immensely contributed to IKS in the religious, Philosophical and other domains.

Two of them, **the Buddhist and the Jain** literature are noteworthy and they have contributed right from 500 BCE to IKS.

Regional Literature

- The separation of regional language in this figure is only convenience.
- Ideally, it could be included under Sanatana dharma.
- Indian constitution has listed 22 languages of the country, in each of these languages, there is a huge corpus of religious, philosophical and other literature.
- Ex:- Tamil literature has several contributions in the Sangam Period.

Oral Traditions

- The diversity of cultural practices and regional preferences have paved the way for oral traditions to preserve and transmit knowledge across generations.
- These have been primarily in the form of folklore artistic endeavors, skillful jobs, foods and life practices and health.
- Sanskrit has been dominant language for transacting knowledge for a long time in India.

Vedic corpus

What is Veda? The word Veda is derived from the root vid which means 'to know'. The word Veda means the sacred knowledge contained in the texts known as Vedic text. Careful studies have shown that the Vedic texts reflect two stages of development in terms of literature as well as social and cultural evolution. The Rigveda which is the oldest Vedic text reflects one stage of social and cultural development whereas the other three Vedas reflect another stage. The first stage is known as the Rigvedic period, or Early Vedic period and the later stage is known as the Later Vedic period.

Chaturdaśa-Vidyāsthāna

- (चतुर्दश-विविधमथान):

- A classification framework for the sanatana-dharmic literature as we have defined in the previous section is available within the resources itself.
- In this framework, the literature is systematically organized under 14 major divisions.
- The components of the 14-part knowledge contain the four vedas (and their upa-vedas), the six vedangas, puranas, the Dharma-sastras, Nyaya.

Chaturdaśa-Vidyāsthāna

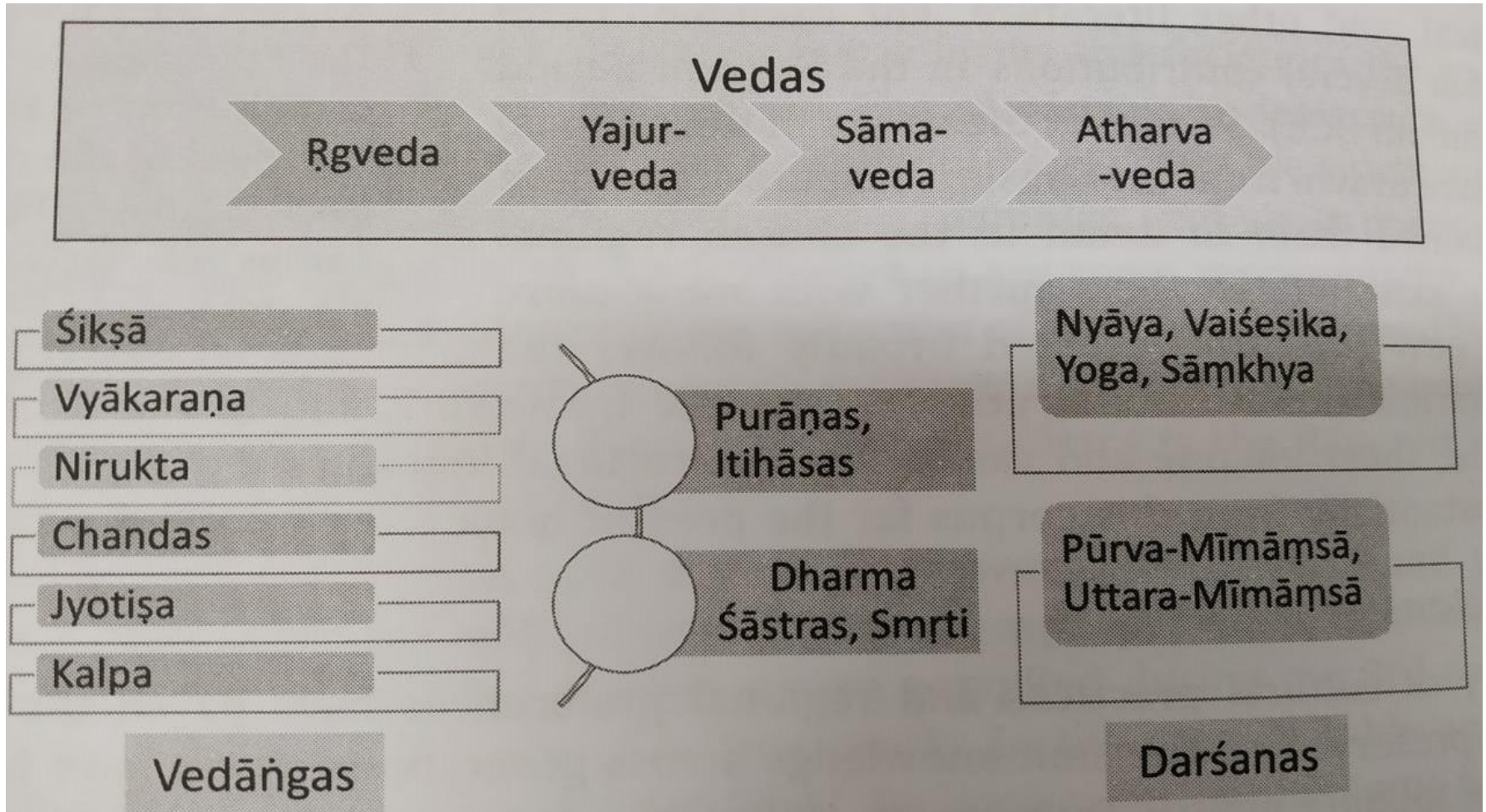


FIGURE 1.3 A Pictorial Representation of Chaturdaśa-Vidyāsthāna

Vedic corpus

- The Vedas are the primordial source of knowledge in the scheme of the Sanatana-dharma literature.
- They are also known as Sruti.
- Vedas provides the overall defining framework for living.
- The upa-vedas are typically associated with the vedas on account of the material being found in the respective Vedas.

Vedangas & Darshana's

- To benefit fully from the Vedas some complementary tools and skills are required.
- These help to understand the exact meaning and intent of what is presented in the Vedas and follow them based on specific instructions provided.
- These are collectively referred to as Vedangas.

Darshana's

- It is a natural quest for everyone to understand three forces that operate and interact with one another: an individual (Jiva), the Universe (Jagat), and a larger force governing the other two (variously referred to as Isvara, Brahman etc.)
- Darshana essentially means a philosophical thought or view.
- There are six schools of philosophy in the sanatan-dharma literature.

Puranas and Itihasas

- Puranas contains a rich repository of ideas that seek to explain various aspects of the Vedic thoughts using detailed stories and anecdotes (उपाख्यानों).
- They present several socio-cultural ideas and practices of living.
- The stories in the puranas related to pre-historic events.
- Itihasas, related to historical events that have taken place which can be associated with specific timelines.
- As we know, Mahabharata and Ramayana are two well known itihasas.

Dharma-shastras and Smritis

- A guide to lead a dharmic life based on the principles of the Veda is required.
- The dharmic principles engrained in the Vedic corpus are presented in multiple formats in our knowledge traditions.
- Smritis are rule books with specific operating guidelines of how to put the dharmic principles into action and what are the consequences of not doing so.

Historicity of IKS

- Dating of the Indian Literature is a major challenge for today's researchers.
- Other related challenge is that most of the indian knowledge repositories in the BCE (Before Common Era or Before Current Era or Before Christian Era) were oral.
- A useful source of data is to fix the Indian knowledge is the astronomical references found in the texts.

Before 3000 BCE & 3000 BCE to 500 CE

- This era is categorized as the dark age for western civilization since no evidence of any organized knowledge (either oral or written) is available.
- Earlier estimates of time periods for Vedas, puranas and the Itihasas prove it to be erroneous as new evidence and methods to date the knowledge become available.

3000 BCE to 500 CE

- This period roughly starts with the beginning of recorded human history as per the western context and extending as far as 500 CE.
- In an oral tradition, the entire knowledge is to be committed to one's memory.
- Therefore, it needs to be concise, and specific.

500 CE to 1800 CE

During this era, Indians have significant strides in the area of mathematics, astronomy, philosophy, spirituality.

Several contributions have also been made in other areas such as alchemy, metalworking etc.

A Sample list of the IKS Repository

Sl. No.	Name of the Work	Keyword 1	Keyword 2
Before 3,000 BCE			
1	Vedas	Dharma (Code of Living)	Several Other Topics
2	Purāṇas*		
3	Mahābhārata, Rāmāyaṇa		

A Sample list of the IKS Repository

3,000 BCE to 500 CE			
1	Vedāṅga-jyotiṣa	Astronomy	
2	Manu-smṛti	Public Administration	Dharma (Code of Living)
3	Śulba-sūtras	Mathematics	Dharma (Code of Living)
4	Suśruta-saṃhitā	Health	Wellness
5	Aṣṭādhyāyī, Nirukta	Linguistics	Grammar
6	Nāṭyaśāstra	Art Forms	Dance, Theatre
7	Buddhist Texts	Philosophy	Mathematics
8	Nyāya and Vaiśeṣika Sūtras	Logic, Epistemology	Knowledge Framework
9	Jaina Mathematical Works	Mathematics	
10	Arthaśāstra	Public Administration	Finance, Foreign Policy
11	Chandaḥ-śāstra	Metrical Pattern, Prosody	Binary Maths Ideas
12	Yoga-sūtras	Control of Mind	Philosophy
13	Kāmasūtra	Art Forms	Dharma (Code of Living)
14	Mahā-bhāṣya	Sanskrit Language	Grammar
15	Rasaratnākara	Alchemy	
16	Caraka-saṃhitā	Health	Wellness
17	Sāṃkhya-darśana	Philosophy	Psychology
18	Amarakośa	Linguistics	Lexicography
19	Sūrya-siddhānta	Astronomy	Mathematics
20	Bṛhat-saṃhitā	Astronomy, Mathematics	Several Other Topics
500 CE to 1,800 CE			

A Sample list of the IKS Repository

20	Bṛhat-saṃhitā	500 CE to 1,800 CE	
			Mathematics
1	Āryabhaṭīya, Ārya-siddhānta	Astronomy	
2	Pañca-siddhāntikā	Astronomy	
3	Mayamata	Architecture	
4	Brāhmasphuṭa-siddhānta	Astronomy	Mathematics
5	Mānasāra	Architecture	Town Planning
6	Āryabhaṭīya-bhaṣya, Mahābhāskariya	Astronomy	Mathematics
7	Nārada-śilpa-śāstra	Architecture	Iconography
8	Gaṇita-sāra-saṅgraha	Mathematics	
9	Siddhānta-śekhara	Astronomy	

A Sample list of the IKS Repository

<i>Sl. No.</i>	<i>Name of the Work</i>	<i>Keyword 1</i>	<i>Keyword 2</i>
10	Yukti-kalpataru	Shipbuilding	Several Other Topics
11	Samarāṅgaṇa-sūtradhāra	Architecture	Several Other Topics
12	Siddhānta-śiromaṇi	Astronomy	Mathematics
13	Kāśyapa-śilpa-śāstra	Temple Architecture	Iconography
14	Aṣṭāṅga-hṛdaya, Rasaratna-samuccaya	Alchemy	Health, Wellness
15	Kerala School of Mathematics	Mathematics	Astronomy
16	Graha-lāghava	Astronomy	

Some Unique aspects of IKS

• Nuances (बारीकियों) of an Oral Tradition:

- ✓ IKS is by and large oral tradition. If knowledge needs to be transmitted orally, it requires a few things.
- ✓ In IKS a single work can provide simultaneously ideas on three streams: Spiritual, Religious and Secular.
- ✓ A large number of works in IKS are in verses set to a metrical (शार्ङ्ग) structure irrespective of whether the subject matter is literature, mathematics, or engineering.
- ✓ Two important dimensions of oral traditions are:
 - Religious Vs Material Dimension Spiritual
 - Vs Material Dimension

• Typical Presentation Style- Sutras, Encryptions:

- ✓ This is used irrespective of whether the work is original or a commentary on another work.
- ✓ It is also independent of whether the subject matter is literature, mathematics, or engineering.
- ✓ Several innovation methods are used to make the message concise and amenable (संक्षिप्त और उत्तरायी) to a metrical presentation.

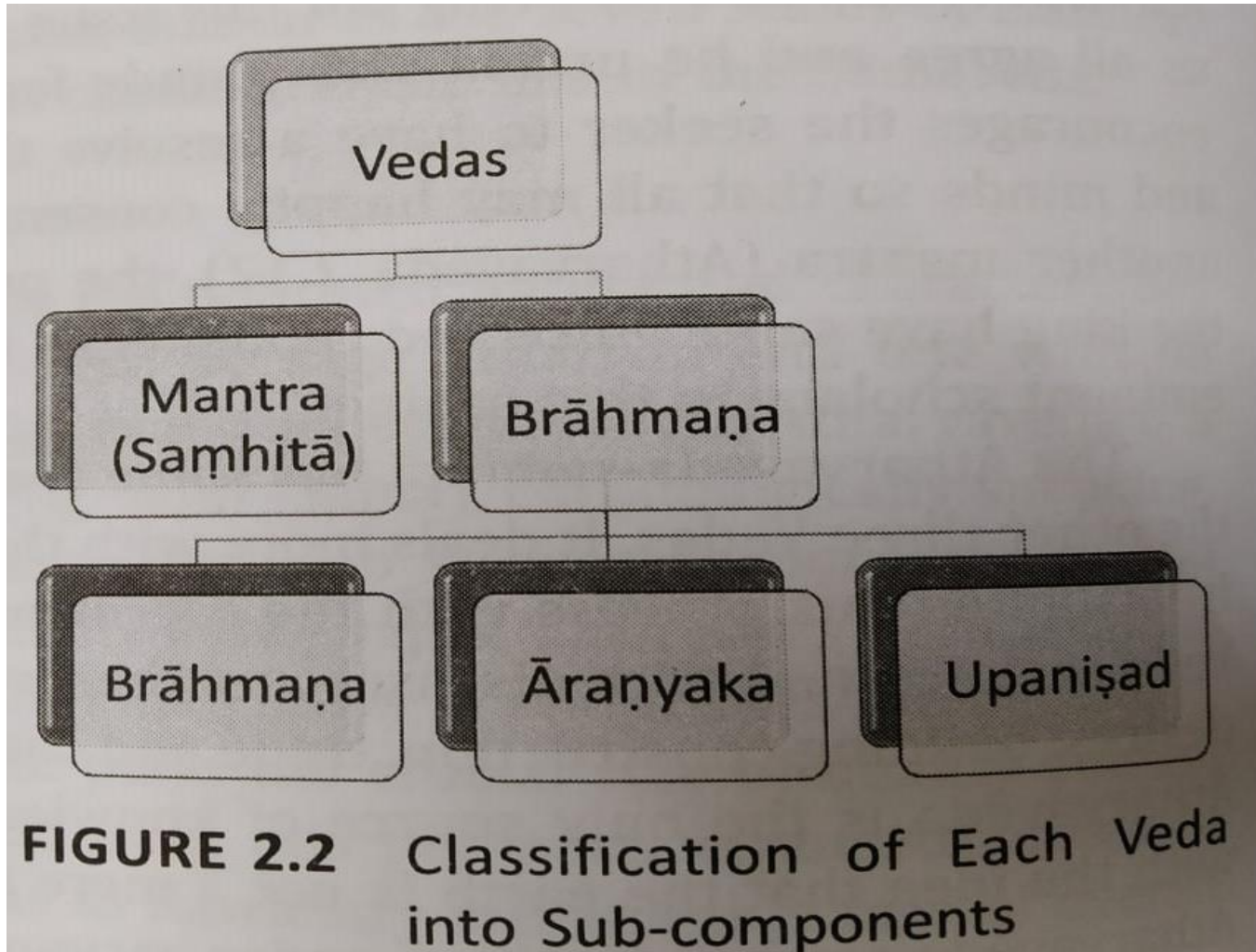
VEDAS

- The word Vedas is generally derived from the Sanskrit root vid.
- The word Veda can be derived from five verbal roots, these means:
 - ✓ To exist
 - ✓ To discriminate
 - ✓ To obtain
 - ✓ To know
 - ✓ To make
- Veda is transmitted orally and preserved intact from time immemorial.
- Vedas have well-developed system of phonetics that has ensured its preservation.
- Recognized by UNESCO as heritage.
- It is well-known that the *Vedas* are the oldest surviving literary works in the whole world.
- Types of Vedas: ***Rigveda, Yajurveda, Samaveda, Atharvaveda***

Rigveda, Yajurveda, Samaveda, Atharvaveda

- Rigveda is the oldest, largest and the main repository.
- Rigveda should be studied by one who wants to understand Indian, Literature and spiritual culture.
- Lofty and interesting set of ideas found in Rigveda makes it contextually relevant.
- Yajurveda mainly focus on Yajna and a list of various Yajnas are found in this Veda.
- Yajurveda is in two major branches: Krsna (Black)-Yajurveda and Sukla (White) -Yajurveda.
- Yajurveda include anatomy, metals, constellation, seasons, numbers and geometry, grains and yogic insights.
- The word Sāmaveda is derived from the Sanskrit word Sama indicating 'to please pacify or satisfy', it refers to the singing of Rig Veda mantras.
- Sāmaveda has currently three branches: Kauthuma, Ranayaniya and Jaiminiya.
- Sāmaveda is used to please the devatas by singing mantras after making the offering.
- Atharvaṇaveda has details on diseases and their cure.
- Prayers for prosperity and peace in the Vedas invariably included all the living organism in the Universe, not just the mankind.

The Four Divisions of Each Veda



Samhita

- Each Veda consists of Samhita, Brahmana, Aranyaka and Upanishads.
- There were 25 women rishis who have composed hymns in Rigveda.
- Samhita constitutes the main portion of each Vedas and consist of a certain number of mantras presented in metrical form.

Brahmanas & Aranyakas

‘Brahmin’, used to denote the caste.

- These are a collection of knowledge mainly confined to the issue of ritual and rites written in prose.
 - Brahmanas does not relate to the modern word
- Brahmanas prescribe the mantras from the Samhitas that need to be recited for the rituals.
- Aranyakas inquire into the philosophical aspect of a yajna.
- Aranyakas are considered as bridge between brahmanas and Upanishads.
- Aranyakas represent the Upasana kanda of the Vedas.

Upanishads

- Upanishads are philosophical treatises dealing with the ultimate problems of life that every one of us confronts.
- The word Upanishads means sitting near a Guru and receiving his wisdom through teaching-learning process.
- Over 1180 Upanishads were supposed to have been part of the vedic corpus.
- 108 Upanishads are there in the four Vedas.
- The loftiest thoughts of the vedic seers are found in Upanishads.
- Upanishads pertains to the jnana-kanda of the vedas.
- There are 10 principal upanishads.
- The Maha-vakyas are found in the Upanishads.

Vedangas

- Vedangas texts help us decipher the Vedic texts and know their practical applications, they have other values of practical applicability in other fields also.
- There are six vedangas:
 - 1) Siksa
 - 2) Vyakarana
 - 3) Chandas
 - 4) Nirukta
 - 5) Kalpa
 - 6) Jyotisa

Vedangas

Oral Preservation – Phonetics, Pronunciation etc. (Śikṣā)

Present Knowledge Properly – Grammar (Vyākaraṇa)

Prevent Corruption – Rules for Presenting Knowledge (Chandas)

Ensure Correct Meaning – Book of Synonyms and Etymology (Nirukta)

Establish Norms, Rules and Practices – Manual (Kalpa)

When to do – Methodology for Timing Events (Jyotiṣa)

FIGURE 2.5 The Role of Vedāṅgas

Philosophical Systems

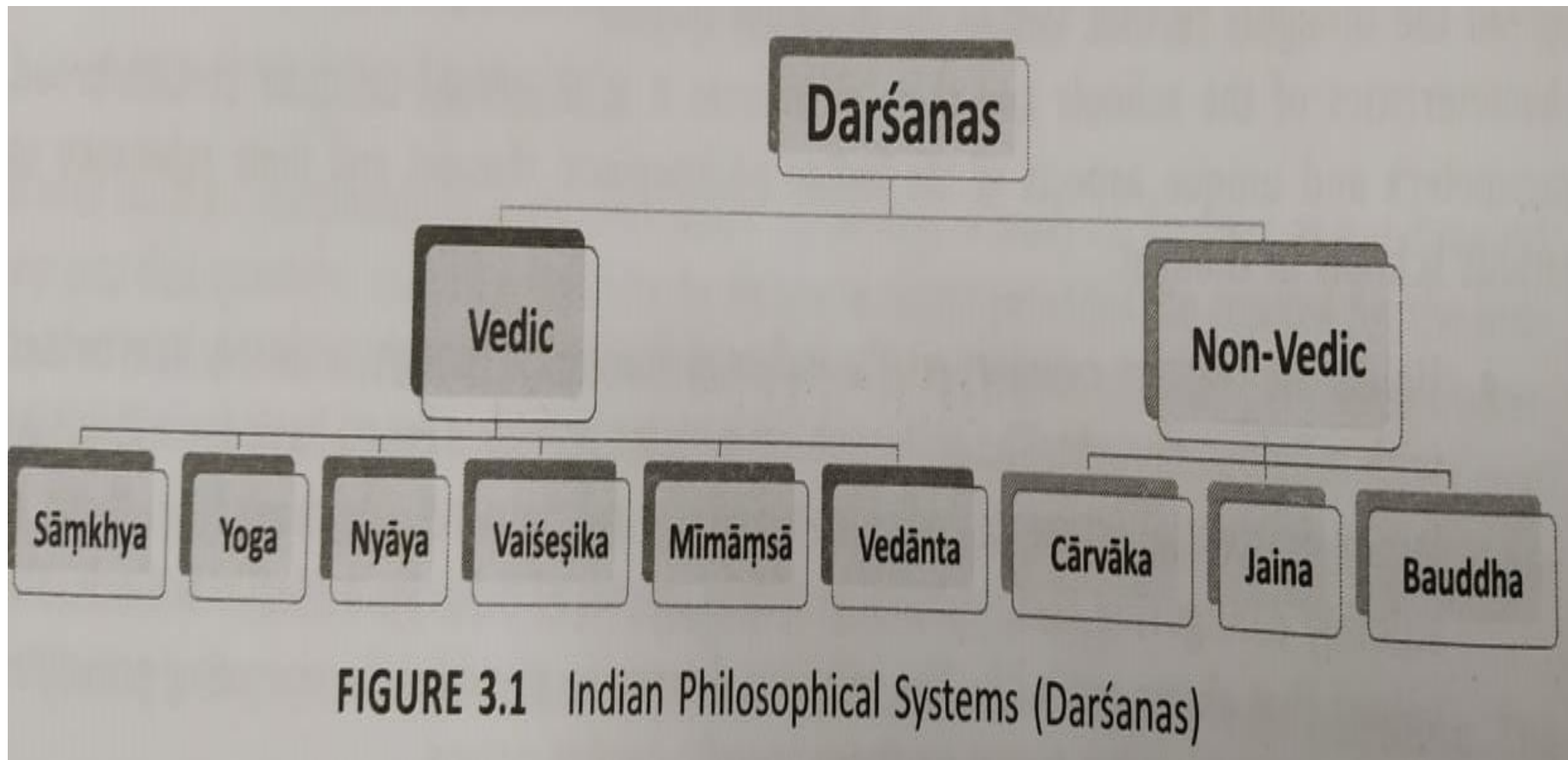
- The Philosophical systems provide a true worldview and a vision for life and helps us resolve the issues that we face in our life.
- The teaching of the Upanishads suggest that attainment of the knowledge of Brahman is the highest goal of human life.

Indian Philosophical Systems

Development and Unique Features

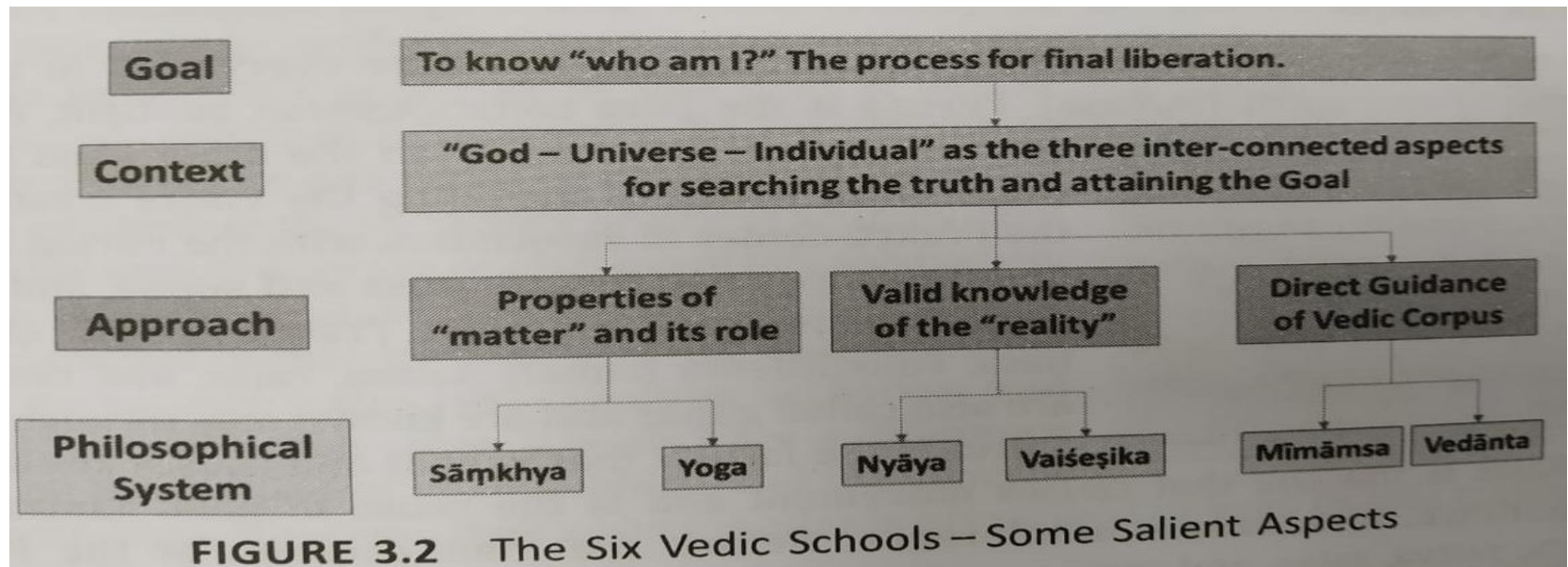
- The beginning of the Philosophical inquiry in India can be traced to the Vedic literature.
- Unlike the western counterpart, the Indian Philosophical thought closely intertwined with religious thought.
- The ultimate goal of the human life is clearly spelt out and the path for attaining the same is also articulated in all the darsanas.
- Two generic classes of philosophical systems could be thought about; Vedic schools of Philosophy and non-vedic schools (Jaina Philosophy, Buddhist Philosophy etc).

Indian Philosophical Systems-Development and Unique Features



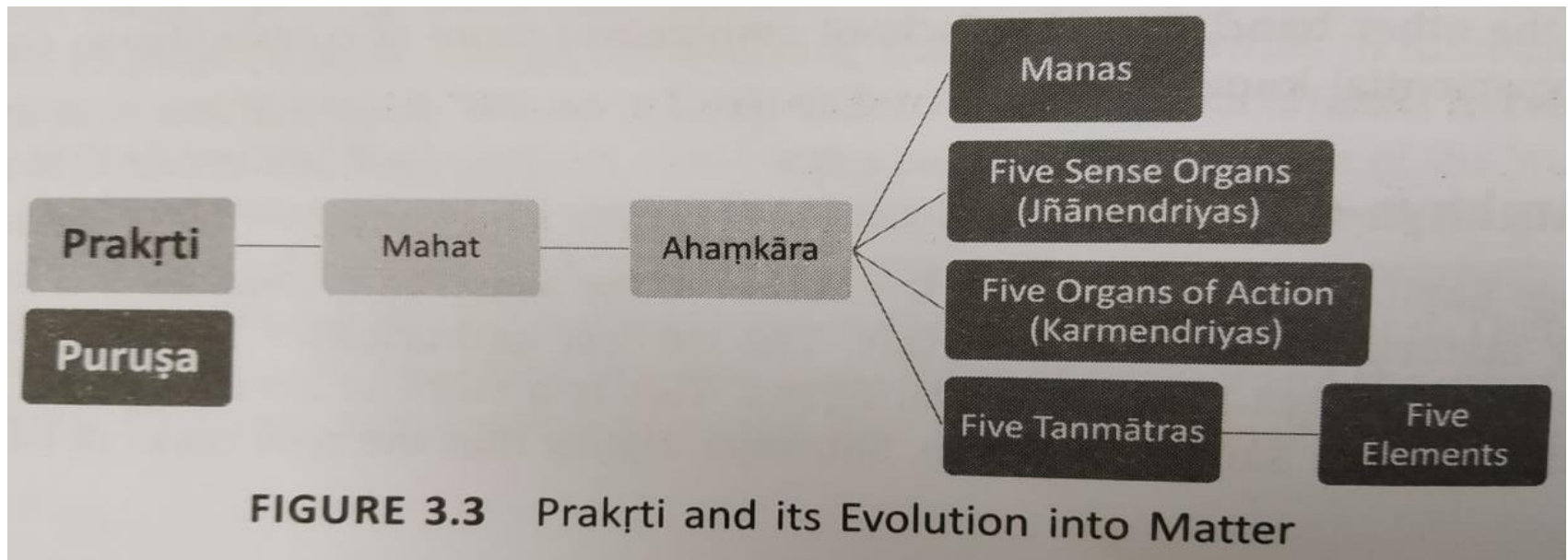
Vedic Schools of Philosophy

- Vedic schools acknowledge the authority of the Vedic text whereas Non-Vedic schools do not.
- The context for philosophical discussion is there inter-related concepts of God-Universe-Individuals.



Samkhya and Yoga schools of Philosophy

- Samkhya-darsana- Purusa and Prakrti
- Yoga-darsana
- Purusa and Prakrti- According to the Samkhya system, two basic elements constitute everything in this world, matter (Prakriti) and spirit (Purusa). Prakriti is made of three basic constituents namely sattva, rajas, and tamas.



Yoga-darsana

- Yoga as a school of philosophy is said to have been founded by Patanjali through his Yoga-sutras.
- According to Yoga Philosophy to attain liberation, an individual must focus on the physical, psychological and moral states of his being.
- Yoga provides a structured and practical eight-step process gradually reach a stage of complete cessation of the activities of Citta.
- Yoga can help an individual address the vexing problem of stress-induced lifestyle leading to health and wellness challenges that modern society is facing.

Yoga-darsana

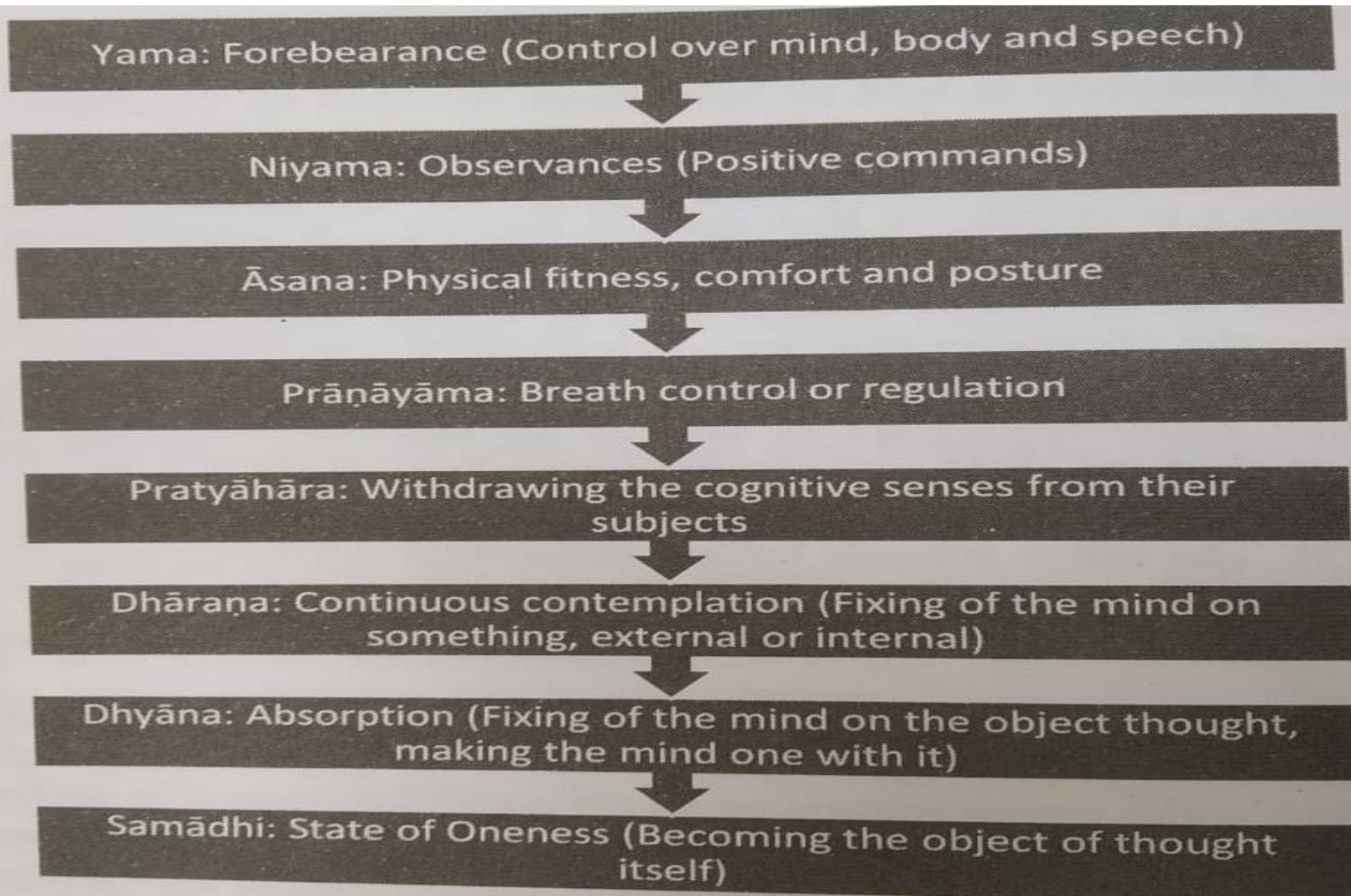


FIGURE 3.4 Aṣṭāṅga-yoga – Eight Step Process

Nyaya and Vaisesika schools of Philosophy

- Nyaya deals with 'ways of knowing the reality' and Vaisesika with 'objects in the reality that knowable'.
- Nyaya and Vaisesika schools place a greater emphasis on obtaining the right knowledge for liberation.
- The word Vaisesika is derived from the word Visesa meaning difference or unique attributes in a thing.
- The Vaisesika school presents the knowable that form all the real entities in the universe using certain categories.

Categories of Nyaya and Vaisesika schools of Philosophy:

- Nyaya-darsana
- Vaisesika-darsan

Purva-Mimamsa and Vedanta schools of philosophy

Philosophy

- This portion typically referred to as Karma Kanda of the Vedic corpus
- Both the schools share common beliefs in several of the philosophical principles.
- This includes the notation of atman, the existence of karma, rebirth and long seemingly endless cycle of birth-death.
- In the context of Purva- Mimamsa schools Mimamsa Means reflection or critical investigation.
- Purva – Mimamsa school has established its tenets based on the karma kand.
- The Purva- Mimamsa text provides rules for the interpretation of the Vedas and Provide philosophical justifications for the observance of Vedic rituals.

Vedanta (Uttara- mimamsa darsana)

- The Vedanta school has established its tenets based on Jnana Kanda.
- The Vedanta school rely on three major texts known as Prasthanas- traya for establish their tenets.
- This includes the Brahma-sutras written by Badarayana (Vyasa).
- Following are the aspects of schools of Vedantas:
 - ☐Advaita- Vedanta (reconizing what is one's inherent nature)
 - ☐Visistadvaita- Vedanta (combines the bhakti to the personal God and impersonal God as espoused in the Upanishads into a single school of thought)
 - ☐Dvaita- Vedanta (that Visnu is the supreme God, the world is real and there is a difference between God and the Jivas.

Non- Vedic Philosophical Systems

- 1) Jaina School of Philosophy
- 2) Buddha School of Philosophy
- 3) Carvaka School

Jaina School of Philosophy

- The word Jaina is derived from the Sanskrit root “ji” to conquer essentially indicating someone who has successfully subdued his passions and obtained mastery.
- In this, the cycle of birth-death is attributed tiny particles of matter that have embedded themselves into Jiva; this is called karma.
- In the Jain philosophy, spiritual growth is to overcome this karma.

Buddha School of Philosophy

- The Buddha School of Philosophy is largely based on the teaching of Gautama Buddha.
- There are two forms of Buddhism: the northern form and southern form.
- Buddha's philosophy focuses on the means of ending the suffering of the individuals.
- The four noble truths of Buddhism are:
 - i. Suffering by clinging to 5 aggregates
 - ii. Thirst causes rebirth and suffering
 - iii. Cessation of suffering by destruction of desire
 - iv. 8-fold path to end the suffering

Carvaka School

- Carvaka School of thought closely maps to the trait of materialism which emphasizes a life of enjoyment based on certain principles and assumptions about life.
- According to Carvaka school whatever is directly perceivable can only be accepted as valid means of knowledge.
- No text of the Carvaka school is available to us today which discusses its tenets in totality.
- **Features of Carvaka school**
 - Matter is ultimate reality
 - World is made of four basic elements
 - No room for any of the transcendental entities
 - No afterlife, rebirth
 - Conclusions and knowledge are embodied, not eternal
 - Goal of life is experience pleasure 'here and now'

Wisdom through the Ages

- Stories provide a powerful medium through which one can impart education on a wide range of topics.
- The genesis of this text provides interesting insights into the power of storytelling in bringing the accumulated wisdom to use.

Puranas- An Encyclopedic Work

- Puranas are one of the most important literary sources of ancient and medieval Indian history and culture.
- Puranas are companion texts to help understand and interpret the Vedas.
- The study of Puranas and the Upapuranas are critical to developing an understanding of the social and religious institutions of India.
- Puranas deals with the evolution of the universe, the recreation of the universe, genealogies of Gods and seers (ऋषिओं और द्रष्टाओं की वंशावली), and history of royal families.

Categories of Puranas

1) Maha- puranas

- ☐ 18 in number, about 400,00 verses
- ☐ Cover a wide variety of topics
- ☐ Has five lakshanas

2) Upa- puranas

- ☐ Several available
- ☐ 18 identified as prominent
- ☐ Smaller than Maha-Puranas

3) Sthala- puranas

- ☐ Several of them available
- ☐ Regional focus
- ☐ All Languages (mainly in Sanskrit)

Contents/ Characteristics of the Puranas

There are five Characteristics of Puranas known as panca-laksanas.

- i. Sarga (Creation of the Universe)
- ii. Prati-Sarga (Destruction and re-creation)
- iii. Vamsa (Dynasties (राजवंशों) of Kings)
- iv. Manvantara (Times of different Manus)
- v. Vamsanucarita (Stories of the Dynasties)

Issues of Interest in the Puranas

- Puranas contain several discussions related to the plant kingdom and its role in addressing food, medicine and other requirements of society.
- Several Puranas have discussions on astronomy, which consists of ideas in the pre-telescope age.
- Issues of Interest:
 - i. Food and Medicine
 - ii. Foetal Development: Stages of Growth
 - iii. Astronomy
 - iv. Geography

Itihasa as a source of Wisdom

- The etymology of the word Itihasa provides us some clues about the nature of the work and its content.
- The word Itihasa points to history.
- The text which teaches the four goals of life Dharma, Artha, Kama and Moksa and which deals with stories of historical happenings is called Itihasa.
- According to Kautilya- history (Purana, Itivrtta), tales (Akhyayika), illustrative stories (Udaharana), Dharmasastra and Arthasastra are known by the name Itihasa.

Uniqueness of the two Epics

- The two Itihasa Ramayana and Mahabharata occupy a very unique position in the repository of the Indian Knowledge System.
- Itihasa is stories related to some past events viewed through the lens of four purusarthas.
- Ramayana and Mahabharata are two encyclopedias of the ancient Aryan life and Wisdom, Portraying an ideal civilization.

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- Ramayana takes a normative approach while Mahabharata takes a descriptive approach to present events and decisions.
- Indian drama, dance and other performing arts have been greatly influenced by the two epics.

Ramayana- Key Issues and Messages

- Ramayana consists of seven books which are called as Kandas, organized into 654 sargas (chapters) and 23672 verses.

Ramayana is a vast history of Rama but also consist of many other related instances.

- In India, more than 40 versions of Ramayana in different languages like the Ramcaritmanas in Avadhi, Kamba-Ramayana in Tamil. Madhava-Kandali in Assamese, Gona Budha's Ranganatha-Ramayana in Telugu, Jagamohan- Ramayana in Oriya, Narahari-Ramayana in Kannada, etc.
- Ramayana has played a significant role in cultural transmission between Indian and other Asian countries.
- Ramayana provides a rich opportunity to understand important aspects of peaceful; co-existence and successfulness.
- According to Ramayana, Rama is not merely a human being but an embodiment and a living entity of the concept of Dharma.

Ramayana- Kandas

Ramayan encourages one to contemplate the difference between 'goodness' and 'greatness' and the need to have both to succeed in life.

- Bala-Kanda
- Ayodhya-Kanda
- Aranya-Kanda
- Kiskindha-Kanda
- Sundera-Kand
- Yuddha-Kand
- Uttara-Kand

Mahabharata-A Sourcebook For Worldly Wisdom

- Mahabharata is one of the greatest poems in the world composed by Krsna - Dvaipayana (Veda Vyasa).
- Mahabharata discuss a verity of topics including law, philosophy, religion and custom.
- Mahabharata presents the reality of life and allows the reader to pick up their lessons for living.
- Nitis are the guidance to take a person to the path of Dharma by providing the right perspectives about life and goals.

Mahabharata- Issues Discussed in the Text

- 1) Birth, Childhood and Rivalry
 - 2) Banishing of Pandavas
 - 3) Failed peace parleys leading to war
 - 4) Post-war conversation between Yudhishthira and Bhishma
 - 5) The exit of the character
- 1,00,000 verses, over 2,000 chapters
 - Descriptive approach- characters present the reality of life
 - Rich collection of deeply nested stories
 - Many nuggets of wisdom- Yaksha Prasna, Vidhur Niti, Sanat- sujatiya, Bhagavad Gita

Niti-Sastras- Collection of Snippets of Wisdom

- Nitis are the guidelines to take a person to the path of Dharma by providing the right perspectives about life and life goals.
- The role of Niti- sastras lies in providing us helpful direction from past experiences.
- Niti texts take into consideration the very basic rules that all purusarthas are generally guaranteed to the individuals by the universe.

Some Selected Niti Texts

- i. Barhaspatyam
- ii. Vidura-Niti (Part of Mahabharata)
- iii. Pancatantra (Visnu Samra)
- iv. Hitopadesa (Narayana Pandita)
- v. Niti- sataka (Bartrhari)

Subhasitas- A Collection of Insights From Various Texts

- The concise poetry which communicates the valuable message for the society with some interesting examples is called Subhasitas.
- These are nothing but a systematic collection of insightful observations, examples and principles of life from a wide range of existing repositories of literary work.
- Collection of ideas from various texts comes from certain traditions of the great Indian poets.

INTRODUCTION TO INDIAN PHILOSOPHY

Introduction to Indian philosophy means the study of Vedas, Upanishad, Ramayan, Mahabharat, Bhagwat Geeta, Philosophy (Darshana (दर्शन) / Tattvadnyan (तत्त्वज्ञान), Chanakya Niti, Vidur Niti, Hatha yoga, Panchatantra, Rushi, Munni, Sant so on.

Introduction to Indian philosophy includes

- 1) The study of human beings, developing the human culture, education, and tradition.
- 2) The study of cosmology, understanding nature and its cause and effect, and establishing the connection between humans.
- 3) The study of God, understanding the Brahman and establishing the spiritual connection between humans.
- 4) The study of philosophers and thinkers, understanding their thoughts and establishing their theories and practices.

Meaning of Philosophy

The etymological meaning of the word 'philosophy' is 'love of learning'. Another word for philosophy is Darshana (दर्शन) and Tattvadnyan (तत्त्वज्ञान). The word Tattvadnyan means – principle (Tattva) + knowledge (Gnyan), Tattva = Tat + Tva + Gnyan, where 'tat' means stretched, expanded or pervaded and 'Tva' means facts. The word Darshana is derived from the Sanskrit root 'Dris' which means to see. Darshana means 'vision' and also the 'instrument of vision'. It stands for the direct, immediate and intuitive vision of reality, the actual perception of truth and also includes the means which lead to this realization. 'See the Self' (atma va are drastavyah) is the keynote of all schools of Indian Philosophy.

The 5 characteristics of philosophy

- Open-mindedness. Listen to all ideas.
- Skepticism. Not accept answer without question until justification.
- Systemic approach. Connect b/w beliefs and thoughts/logical organized.
- Basis in justifying reason. ...
- Universality. ...
- World. ...
- Love of wisdom, parent of all discipline, helps navigate questions.

What are the five elements of Indian philosophy?

The elements are:

Prithvi (Sanskrit: पृथ्वीः, Earth),

Jal (Sanskrit: आपः, Water),

Agni (Sanskrit: अग्नि, Fire),

Vayu (Sanskrit: वायुः, Air),

Akasha (Sanskrit: आकाश, Aether).

In Ayurveda and Indian philosophy, the human body is made of these five elements.

What are the types of Indian philosophy?

- Vaisheshika,
- Nyaya,
- Samkhya,
- Yoga,
- Purva Mimansa and
- Vedanta or Uttara Mimansa.

These six systems of philosophy are said to have been founded by sages Konada, Gotama, Kapila, Patanjali, Jaimini and Vyasa, respectively. These philosophies still guide scholarly discourse in the country.

What is the scope in philosophy in India?

Those who have pursued PhD in Philosophy can apply for the post of Assistant Professor and Professor in various colleges. They can also work in various jobs that are open to all graduates such as SEO specialist, Content Writer and Social Worker, AI specialists, scientists, Psychologists, etc.,

Why is philosophy important?

- Philosophy is important because it helps us think critically, solve problems, and make better decisions. It also helps us understand the world around us and our place in it.
- How philosophy helps us think critically
- Ask questions:** Philosophy encourages us to question assumptions and examine arguments and evidence.
- Evaluate perspectives:** Philosophy helps us consider different points of view.
- Make better decisions:** Philosophy helps us weigh options and consider consequences.
- Understand ourselves:** Philosophy helps us understand our own biases and areas for improvement.
- How philosophy helps us understand the world

Importance of philosophy

- **Understand reality:** Philosophy helps us understand the nature of reality, existence, and objects.
- **Understand knowledge:** Philosophy helps us understand what knowledge is and how to acquire it.
- **Understand language:** Philosophy helps us understand the nature of language and its relationship to thought and understanding.
- **Understand morality:** Philosophy helps us understand what is morally good and bad.
- **Philosophy's relevance**
 - Philosophy is relevant in many areas of life, including business, politics, and personal relationships. It can also help us develop a personal philosophy that guides our life decisions.

What are the 7 parts of philosophy?

- The 7 branches of philosophy, including
- Metaphysics, -Reality
- Axiology, -The study of the nature of value and valuation, and of the kinds of things that are valuable.
- Epistemology, - knowledge
- Logic, -reasoning
- Ethics,- study of morality
- Political Philosophy, - Administration & Governance
- and Aesthetics. –Art & beauty

The following are the major Indian philosophical schools or systems (darshanas) and the author or founder of the system

- 1 The Nyaya system of Aksapada Gautama
- 2 The Vaishesika system of Maharshi Kanada
- 3 The Sankhya system of Kapila muni
- 4 The Yoga system of Patanjali
- 5 The Mimamsa system of Jaimini
- 6 The Vedanta system of Badarayana Vyas
- 7 The Bauddha System of Gantama Buddha
8. The Jaina system of Vardhamana Mahavira
9. The Carvaka system of Carvaka (Brahhaspati)

1 The Nyaya system of Aksapada Gautama

Nyaya means argumentation and suggests that the system is predominantly intellectual, analytic, logical and epistemological. It is also called Tarkashastra or the science of reasoning; Pramanashastra or the science of logic and epistemology; Hetuvidya or the science of causes; Vadavidya or the science of debate; and Anviksiki or the science of critical study.

2 The Vaisesika system of Maharshi Kanada

The Vaishesika divides all existent reals which are all objects of knowledge into two classes—bhava or being and abhava or non-being.

Six categories come under bhava and the seventh is abhava. All knowledge necessarily points to an object beyond and independent of it. All that is real comes under the object of knowledge and is called a padartha. The seven padarthas are: (i) substance (dravya), (2) quality (guna), (3) action (karma), (4) generality (samanya), (5) particularity (vishesa), (6) inherence (samavaya), and (7) non-being (abhava).

3. The Sankhya system of Kapila muni

The word 'Sankhya' is derived from the word 'Sankhya' which means right knowledge as well as number. The Gita uses this word in the sense of knowledge, so does the Mahabharata at other places also. Sankhya means the philosophy of right knowledge (samyak khyati or jnana). The system is predominantly intellectual and theoretical. Right knowledge is the knowledge of the separation of the Purusa from the Prakrti. Yoga, as the counterpart of Sankhya, means action or practice and tells us how the theoretical metaphysical teachings of Sankhya might be realized in actual practice.

4 The Yoga system of Patanjali

Patanjali is the traditional founder of the Yoga system. Vedanta definition of yoga - The word 'Yoga' literally means 'union', i.e., spiritual union of the individual soul with the Universal Soul and is used in this sense in the Vedanta. Gita definition of yoga - The Gita defines Yoga as that state than which there is nothing higher or worth realizing and firmly rooted in which a person is never shaken even by the greatest pain; that state free from all pain and misery is Yoga.

5 The Mimamsa system of Jaimini

The word 'Mimamsa' literally means 'revered thought' and was originally applied to the interpretation of the Vedic rituals which commanded highest reverence. The word Mimamsa is now used in the sense of any critical investigation. The school of Mimamsa justifies both these meanings by giving us rules according to which the commandments of the Veda are to be interpreted and by giving a philosophical justification for the Vedic ritualism.

5. The Vedanta system of Badrayana Vyas

Mimamsa deals with the earlier portion of the Veda and is therefore called Purva- Mimamsa and also Karma- Mimamsa, while Vedanta deals with the later portion of the Veda and is therefore called Uttara- Mimamsa and also Jnana- Mimamsa. The former deals with Dharma and the latter with Brahma and therefore the former is also called Dharma- Mimamsa, while the latter is also called Brahma- Mimamsa. Purva Mimamsa regards the Veda as eternal and authorless and of infallible authority.

7 The Bauddha System of Gantama Buddha

Gautama Buddha (563B.c.- 483B.C) Was a great Philosopher, social reformer, and founder of Buddhism.

THE FOUR NOBLE TRUTH

1. The first truth is dukkha (There is suffering)
2. The second truth is dukkha samudaya (There is the cause of suffering)
3. Dukkha Nirodha (There is the end of suffering)
4. Dukkha Nirodha Gamini Patipada(There is the path that leads to the end of suffering)

NOBLE EIGHT FOLD PATH

Eight-fold path is a matter of practice rather than only intellectual discussion or knowledge. To apply this in our day-to-day life there is need to understand it properly. Noble Eightfold Path is as follows:

- 1) Right Views (Samyak Drishti)
- 2) Right Resolve (Samyak Sankalpa)
- 3) Right Speech (Samyak Vacha)
- 4) Right Action (Samyak Karma)
- 5) Right Livelihood (Samyak Ajivika)
- 6) Right Effort (Samyak Vyayama)
- 7) Right Mindfulness (Samyak Smruti)
- 8) Right Concentration (Samyak Samadhi)

THEORY OF NO-SELF (ANATMAVADA): Anatta is a Buddhist concept which explains that a permanent soul or self does not exist.

KSHANIKAVADA: According to kshanikavada, everything is momentary, conditional, relative and dependent.

8. The Jaina system of Vardhamana Mahavira

Jainism emerged in India at around the same time as that of Buddhism and it was well established in the 6th – 5th century BCE. This was the time when Mahāvīra preached in the eastern part of India, then known as Magadha. Jainism is a religion of purely human origin and is preached by one who has attained omniscience and self – control by his own personal efforts. As per Jaina traditions, there are 24 Tirthankaras or great preachers. The tradition of Jainism as a faith is present on the Indian subcontinent, without any break. The term ‘jina’ means a conqueror, or Tirthankaras (‘Ford-makers’, because they have crossed to liberation) who provide ultimate models to the followers to conquer greed, hatred, anger, desire, pride etc, which if not controlled leads to passion and bondage in worldly existence of the cycles of life and death.

Jain Philosophy

The dualistic metaphysics of Jain philosophy, which holds that there are two distinct categories of existence, the living, conscious, or sentient being (jiva) and the non-living or material being (ajiva), is one of its main features (ajiva).

Triratnas (Three -fold path of Moksha)

- a. **Right Belief** - Samyak Darshana
- b. **Right Knowledge** - Samyak Jnana
- c. **Right conduct** - Samyak charitra

In order to acquire these, one must observe the five great vows:

Ahimsa – abstention from violence or injury to living beings

Satya – abstention from false speech

Asteya – abstention from theft

Brahmacharya – abstinence from sexuality or unchastity

Aparigraha – abstention from greed for worldly possessions
– abstinence from sexuality or unchastity

9. The Carvaka system of Carvaka (Brahhaspati)

Carvaka is materialistic philosophy. According to Carvaka, the world has originated from matter. Spirit is the invention of matter. In short Carvaka is a sweet spoken. According to some thinkers Brihaspati is the founder of this philosophy.

' प्रत्यक्षम एवम प ्रमाणम (only direct perception is valid) This is the main theme of Carvaka philosophy, Carvaka is a only philosophy which believes only one means "Pramana" of knowledge.

Metaphysics is the theory of reality. The Carvaka theory of reality follows from their epistemology which states that perception is the only source of knowledge. - The Metaphysics of Carvaka is called as materialism.

Features of Carvaka philosophy

- Matter is ultimate reality
- World is made of four basic elements
- No room for any of the transcendental entities
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- Conclusions and knowledge are embodied, not eternal
- Goal of life is experiencing pleasure 'here and now'

Vedantha Philosophies

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Traditional knowledge vis-a-vis Indigenous knowledge

Meaning: In India, while often used interchangeably, "traditional knowledge" and "indigenous knowledge" are distinct in their emphasis, with "traditional knowledge" encompassing a broader spectrum of practices passed down through generations within a community, while "indigenous knowledge" specifically refers to the knowledge systems developed and held by indigenous tribal communities, deeply rooted in their cultural understanding of their local environment and ecosystems; both are vital for sustainable development and cultural preservation in the country.

Traditional knowledge vis-a-vis Indigenous knowledge

Scope:

- "Traditional knowledge" can include practices from various social groups within a region, encompassing knowledge about agriculture, medicine, food preservation, crafts, and even folklore, whereas "indigenous knowledge" is more focused on the knowledge held by tribal communities, often deeply intertwined with their cultural beliefs and practices regarding land management, biodiversity conservation, and natural resource utilization.

Cultural Context:

- While traditional knowledge may be influenced by the dominant culture, indigenous knowledge is considered a distinct cultural heritage, reflecting the unique relationship between a tribal community and their environment.

Traditional knowledge vis-a-vis Indigenous knowledge

Traditional knowledge or indigenous knowledge is developed by local indigenous communities that are well-developed and whose long-standing customs and practices are followed by these communities from generation to generation. Studies into the origins, behaviour, and development of humanism in both prehistoric and modern societies led to the recognition of traditional knowledge. The adoption of traditional knowledge by international organisations, like the UN, has resulted in its widespread appreciation and recognition.

Importance of TK

- Traditional knowledge (TK) refers to the knowledge, know-how, skills, and practices developed, maintained, and passed down from one generation to another. These practices are frequently integral to the community's cultural or spiritual identity.
- Traditional knowledge can be found in a wide range of fields, such as agriculture, science, technology, ecology, medicine, and biodiversity-related topics.
 - TK includes both the knowledge itself and conventional cultural expressions, such as signs and symbols. It comes from intellectual activity within a traditional context.
 - It includes the traditional use and management of lands and resources by using indigenous agricultural methods.
 - It also includes traditional medicines (herbs and spices) and medical practices. For example, traditional medical practices like Ayurveda, Yoga, Unani, Siddha, and Naturopathy are recognized in India.

Ways of expression:

- Traditional knowledge is frequently passed down **orally** from generation to generation and is developed from **experience gained** over many years and **adapted** to the local culture and environment. It belongs to everyone as a group and is preserved through **tales, songs, folklore, proverbs, cultural values, beliefs, rituals**, etc.
- Indigenous peoples follow oral traditions, including dances, paintings, carvings, and other artistic expressions, that have been practiced and passed down through millennia

Traditional Knowledge as Intellectual Property

- Though patent, trademark, geographical indication, trade secret, or confidential information protection are available for innovations based on traditional knowledge, **they are not fully covered by conventional intellectual property (IP) laws**. Despite the wide range of policy concerns surrounding traditional knowledge, there are two main themes that emerge when discussing these concerns:
- **Defensive protection:** Defensive protection is a group of methods that are used to prevent third parties from acquiring unauthorized or unjustified [intellectual property rights](#)(IP) over traditional knowledge.
 - These actions include modifying the existing IP laws of the countries, including India, and the **International Patent Classification System** and the **Patent Cooperation Treaty Minimum Documentation**, both of which are administered by WIPO.
 - WIPO has also created a toolkit that will help holders of traditional knowledge properly document their knowledge.
- **Positive protection:** Positive protection is the act of providing traditional knowledge holders with the **right to take necessary action and seek remedies** against the misuse of the knowledge base.

Threats to Traditional Knowledge

- Traditional knowledge has faced centuries of discrimination and exploitation through various means such as colonisation (earlier), capitalism (through MNCs, etc) and ever-increasing consumerism. Some of these threats include the following:
- **Language threat:** Indigenous languages and dialects preserve enormous amounts of traditional knowledge, such as Ayurveda in Sanskrit.
 - These languages have been at the receiving end of colonial exploitation and modern lifestyles.
- **External pressures:** The traditional methods of preserving or transmitting knowledge to future generations are also threatened by external pressures.
 - These include **migration, environmental pressures, the impact of modern lifestyles, disruption of traditional ways of life, and the impact of globalisation**, etc.
- **Biopiracy:** Biopiracy is the commercial exploitation of biochemicals or genetic materials that occur naturally.
 - Generally, traditional knowledge consists of many biological features and genetic diversity of the natural environment and is transmitted from generation to generation.
 - One prominent example is the **multinational corporation's patenting of the medicinal qualities of the turmeric plant**, even though the plant has been used for thousands of years in Indian Ayurvedic medicine.

Need to protect Traditional Knowledge

- The preservation of traditional knowledge is crucial because it plays a crucial role in the social and physical environment of a community.
- **Protecting Indigenous culture and identities:** Traditional knowledge and languages are a significant way to maintain and preserve Indigenous cultures and identities and promote well-being.
- **Protecting livelihoods:** Traditional knowledge is one of the sources of livelihood for indigenous people, which must be protected.
- **Health benefits:** As traditional knowledge is connected with environment and spirituality; they are important to well-being. Further, traditional medicines can provide health benefits to a large population, like in India.
- **Ecological benefits:** Traditional knowledge presents enormous opportunities to conserve forests and biodiversity.
 - For example, **sacred groves** or forest temples are one of the methods to conserve biodiversity.
 - Indigenous people and their traditional methods have been beneficial in conserving biodiversity, for example, the **Maldhari** tribe of Gujarat and the **Bishnois** of Rajasthan.

Need to protect Traditional Knowledge

- **Attaining SDGs:** It may provide helpful solutions to issues like tackling inequality, combating climate change, and food insecurity, among others, that we are attempting to address through the Sustainable Development Goals.
 - There are six specific references to indigenous peoples in the 2030 Agenda for Sustainable Development. These include pledges to guarantee that indigenous children have equal access to education and to double the agricultural output of indigenous small-scale farmers.
 - Countries have also committed to empowering and engaging indigenous peoples in the implementation of the Sustainable Development Goals.

Traditional Knowledge and the UN

- Recognizing the importance of traditional knowledge, the right of indigenous peoples to promote, maintain, and safeguard their traditional knowledge is enshrined in several international normative and policy instruments.
- **UNDRIP:** The UN Declaration of the Rights of Indigenous Peoples (UNDRIP) emphasizes the protection of indigenous peoples' rights to their traditional knowledge (Article 31).
- **UN CBD:** The Convention on Biological Diversity (CBD) acknowledges the close ties of indigenous peoples and communities to biological resources and the contributions that traditional knowledge can make to sustainable biological diversity.
 - The CBD has established a working group to address the implementation and protection of traditional knowledge to this end.
- **LINKS programme:** The Local and Indigenous Knowledge Systems (LINKS) programme of UNESCO encourages the integration of local and indigenous knowledge into global climate science and policy processes.
- **Other initiatives:** Other UN entities also have relevant policies and programmes that recognise the role of traditional knowledge in securing the rights of indigenous peoples, as elaborated in the UN Declaration.

India's Initiatives to Protect Traditional Knowledge

- TKDL: The Department of Indian Systems of Medicine and Homoeopathy (ISM&H, now Ministry of AYUSH) and the Council of Scientific and Industrial Research (CSIR) jointly established the [Traditional Knowledge Digital Library](#) (TKDL), a prior art database of Indian traditional knowledge, in 2001.
- For example, TKDL has helped India successfully block two patent claims of US consumer goods major Colgate-Palmolive, which wanted intellectual property rights (IPR) cover on two oral compositions made from Indian spices and other herbs.
 - Biological Diversity Act 2002
 - Ministry of AYUSH:
 - National IPR Policy 2016
 - Indian Knowledge System
 - National Education Policy (NEP) 2020

Traditional knowledge vs. western knowledge.

Traditional knowledge often relies on holistic, observational understanding passed down through generations, deeply connected to the local environment, and often incorporating spiritual beliefs, while Western knowledge is typically based on analytical, scientific methods, aiming for objectivity and quantitative data, often isolating elements from their context to study them individually...

Key differences

Approach:

- Indian traditional knowledge is often holistic, considering the interconnectedness of all aspects of life and nature, whereas Western knowledge tends to be reductionist, breaking down complex systems into smaller parts for study.

Transmission:

- Indian traditional knowledge is typically passed down orally through generations within a community, while Western knowledge is primarily transmitted through written texts and academic institutions.

Basis of Knowledge:

- Indian traditional knowledge is often based on observation, experience, and spiritual understanding, while Western knowledge relies heavily on empirical evidence and scientific methodology.

Focus on Context:

- Indian traditional knowledge is deeply tied to the local environment and cultural context, while Western knowledge often strives for universal application.

Key differences

- **Traditional:**
- **Medicinal practices:** Using specific plants identified by elders to treat ailments based on generations of observed effectiveness, like using willow bark for pain relief by indigenous communities.
- **Sustainable farming:** Rotating crops based on the patterns of the seasons and observing which plants thrive in certain areas, as practiced by many indigenous groups.
- **Weather prediction:** Using animal behavior or cloud formations to predict upcoming weather patterns, which may be highly accurate in specific regions.
- **Ayurveda:** Traditional Indian system of medicine based on holistic health practices.
- **Yoga:** Physical, mental, and spiritual practices focused on achieving balance and well-being.
- **Jyotish (Astrology):** A system of understanding the cosmos and its influence on human life.
- **Vaastu Shastra:** Traditional Indian architectural design principles based on cosmic energy.

Key differences

Western:

- **Medical treatments:** Developing drugs through controlled clinical trials, isolating active compounds in plants to create pharmaceutical medications.
- **Climate science:** Using complex models and data analysis to predict climate change based on measurable factors like CO2 levels.
- **Agriculture:** Utilizing genetically modified crops designed to maximize yield under controlled conditions.

Key differences:

Transmission:

- Traditional knowledge is often passed down orally through stories and experience, while Western knowledge is primarily transmitted through written texts and academic institutions.

Relationship with nature:

- Traditional knowledge often views humans as an integral part of the natural environment, while Western science can sometimes prioritize human intervention and control over nature.

Epistemology:

- Traditional knowledge can be more holistic and intuitive, relying on observation and interconnectedness, while Western science emphasizes a more analytical and reductionist approach.

Education:

- The Western education system, particularly in countries like the United States, Canada, and parts of Europe, often emphasizes research, critical thinking, and practical learning. In contrast, the Indian education system has traditionally focused more on rote memorization and theoretical knowledge.

Conclusion

Still, there is a vast body of literature on such comparisons between Western science and traditional knowledge systems, which has identified various characteristics and opposing views. Western science favours analytical and reductionist methods as opposed to the more intuitive and holistic view often found in traditional knowledge. Western science is positivist and materialist in contrast to traditional knowledge, which is spiritual and does not make distinctions between empirical and sacred

Western science is objective and quantitative as opposed to traditional knowledge, which is mainly subjective and qualitative. Western science is based on an academic and literate transmission, while traditional knowledge is often passed on orally from one generation to the next by the elders.