

# KNOWLEDGE TRADITIONS AND PRACTICES OF INDIA

## (Code No. 073)

### 2022-23

#### Rationale

The "Knowledge Traditions and Practices of India" has been introduced as an elective subject at the Senior Secondary level w.e.f. 2012-2013 in class XI as a pilot and introduced in all schools w.e.f. 2013 in classes XI and XII. After ten years of general education, students branch out at the beginning of this stage and are exposed to the rigours of the various disciplines for the first time. This is the stage when they are made to start reflecting over their future life and decide a career. At this point, they also become aware of certain knowledge traditions and practices of India that are being followed in their families and society around them but few students get an opportunity to lay hands on the vast treasure of knowledge that lies hidden in the form of literature or books.

This course aims at providing a broad overview of Indian thought in a multidisciplinary and interdisciplinary mode. It would not seek to impart masses of data, but would highlight concepts and major achievements while engaging the student with a sense of exploration and discovery. It would be an introductory course so that students who take this course are prepared for a related field in higher studies in the universities. The course will cultivate critical appreciation of the thought content and provide insights relevant for promoting cognitive ability, health and well-being, good governance, aesthetic appreciation, right values and appropriate worldview. The course will therefore comprehensively deal with all-round personality development of the students and increase their knowledge about their country.

#### Concept of the Course

The knowledge traditions of India are continuous and cumulative. They are textual and exegetical traditions in different areas of thought and experience: philosophy, medicine, grammar, architecture, geography, literary theory, polity and political economy, logic, astronomy and mathematics, military science, metallurgy, agriculture, mining and gemology, and shipbuilding, among others. Concepts and technical vocabularies of these traditions are still a part of the thinking and the languages of modern India.

The tradition is also non-egocentric. The 5th-century philosopher of language, Bhartrihari, states in his *Vakyapadiya*, a cardinal principle of knowledge constitution: "The intellect acquires critical acumen by familiarity with different traditions. How much does one really understand by merely following one's own reasoning only?" (Bhartrihari, *Vakyapadiya*, II.484). The traditions are therefore, intrinsically polycentric; Indian thinkers have constantly engaged in internal debate and dialogue and have also interacted with traditions outside India.

## **Aims and Objectives of the course:**

Students will be able to:

- get familiar with Indian thought in different disciplines.
- get familiar with major Indian thinkers in different disciplines.
- get familiar with the primary texts of Indian thought through an organized study of short extracts in translation of those texts.
- develop a better appreciation and understanding of not only the Knowledge Traditions and Practices of India but also of many contemporary questions and issues that they handle in their course work in related disciplines.
- enhance self-awareness and self-esteem.

## **Specific aims:**

Students will be able to:

- get familiar with the nature of Indian texts.
- read primary texts from various sources and will be able to collect information and develop their critical abilities.
- relate the knowledge to present context.
- develop positive attitude towards Indian thoughts and traditions.
- compare and contrast views given in the units and develop interest in the authentic texts.
- internalise the given knowledge and pursue it further in their courses of studies by gathering more information about thinkers and texts.
- interpret and analyse texts of different kinds and express it in their own language.
- understand the contribution of Indian mind in various fields.
- relate ideas of various disciplines with western thought they are otherwise introduced to in their course work.
- develop a wider understanding of how all knowledge is ultimately interrelated.
- read and know the history of Indian literatures.
- pursue further study in related fields.
- paraphrase the ideas of primary text in English or Hindi.

The following modules are not expected to be covered in the current session:

- **For class XI:** Indian Literatures Part II; Life Science (iii): Plant and Animal Science in Ancient India; Metallurgy; Music in India
- **For class XII:** Architecture Part II; Painting; Society State and Polity; Trade, A Survey

**Knowledge Traditions and Practices of India**  
**Examination Specifications**  
**Class XI (2022-23)**

One Paper

70+30 = 100 Marks

Section-wise weightage of the Paper

Time: 3Hours

S.N	Section Areas of Assessment	No of Periods	Marks
A	<b>Reading Skills</b> Two passages from the textbook	41	20
B	<b>Analytical Skills</b> Two passages for comparing/contrasting relating to the present time. One out of three long answer type questions	41	25
C	<b>Thinking Skills</b> Five out of six short answer questions Ten objective type questions based on Multiple Choice Answers	41	25
D	<b>Research based Project/Portfolio Assessment +viva -voce</b>	30	20+10=30

**SECTION – A**

**READING SKILLS - 20 MARKS**

**Q.1** Two passages from the modules with a variety of questions on different levels of comprehension, i.e., to test literal, interpretative and inferential skills. The total range of two passages would be about 700 to 800 words. **20 marks**

**SECTION – B ANALYTICAL SKILLS - 25 MARKS**

**Q2.** Two passages extracted from different modules for comparing and contrasting and relating the ideas contained – to the present time. The length of both the passages together should be about 600 words.

**10 marks**

**Q.3.** One out of two long answer type questions based on the knowledge of the content to test the insights gained and whether the knowledge has been internalised. **15 marks**

**SECTION – C**  
**THINKING SKILLS - 25 MARKS**

**Q.4.** Five out of six short answer type questions based on the survey sections in the modules.

(Word limit 30-40words)

**5 x 3 = 15 marks**

**Q.5.** Ten objective type MCQs to test global and local understanding of the text. **10 marks**

**SECTION – D**

**RESEARCH BASED PROJECT/ PORTFOLIO ASSESSMENT + VIVA VOICE 20 +10 = 30 marks**

The textbook has inbuilt suggestions and activities for the students to prepare a portfolio or undertake work on a research based project. The purpose is to make students exhibit their efforts and achievements in one or more areas. It is expected that schools organise visits to the traditional seats of learning, historical places, cultural hubs and authentic areas. The project will be assessed through a viva voce also which carries 10 marks out of 30.

Students will be expected to compile and collect material for the project/portfolio which would be assessed on the following points:

- **Presentation:** efforts put in, meaningful material with aesthetic sense.
- **Variety of content:** a wide variety of content in the form of audio visual media, extracts from journals, art work, conference updates, photographs, writing samples, maps, charts, extracts of interview and reading logs etc.
- **Organisation of material collected has been presented with cogency and coherence.**
- **Clarity of understanding and good judgement to test internalization of knowledge.**
- **Viva-voce**

**Prescribed Books:**

A textbook on *Knowledge Traditions and Practices of India* Part - I published by CBSE 2012-13.

**Knowledge Traditions and Practices of India**  
**Examination Specifications**  
**Class - XII (2022-23)**

**One Paper**

**70 + 30 = 100 Marks**

**Section-wise Weightage of the Paper**

**Time: 3 hours**

<b>Sr no</b>	<b>Section Areas of Assessment</b>	<b>No of Periods</b>	<b>Marks</b>
<b>A</b>	<b>Reading Skills</b> Two passages from the textbook	41	20
<b>B</b>	<b>Analytical Skills</b> Two passages for comparing/contrasting relating to the present time. One out of three long answer type questions	41	25
<b>C</b>	<b>Thinking Skills</b> Five out of six short answer questions Ten objective type questions based on Multiple Choice Answers	41	25
<b>D</b>	<b>Research based Project/Portfolio Assessment +viva-voce</b>	30	20+10=30

**SECTION – A**

**READING SKILLS**

**20 MARKS**

- Two passages from the modules with a variety of questions on different levels of comprehension i.e. to test literal, interpretative and inferential skills. The total range of two passages would be about 700 to 800 words.

**SECTION – B ANALYTICAL SKILLS 25 MARKS**

- Two passages extracted from different modules for comparing and contrasting and relating the ideas contained - to the present time. The length of both the passages together should be about 600 words. **10 marks**
- One out of two long answer type questions based on the knowledge of the content to test the insights gained and whether the knowledge has been internalised. **15 marks**

## SECTION – C

### THINKING SKILLS

25 MARKS

4. Five out of six short answer type questions based on the survey sections in the modules.

(Word limit 30-40 words)

5 x 3 = 15 marks

5. Ten objective type MCQs to test global and local understanding of the text. 10 marks

## SECTION – D

### RESEARCH BASED PROJECT/PORTFOLIO ASSESSMENT - VIVA VOCE

20 marks + 10 marks = 30 marks

The textbook has inbuilt suggestions and activities for the students to prepare a portfolio or undertake work on a research based project. The purpose is to make students exhibit their efforts and achievements in one or more areas. It is expected that schools organise visits to the traditional seats of learning, historical places, cultural hubs and authentic areas. The project will be assessed through a viva voce also which carries 10 marks out of 30.

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- **Organisation of material collected has been presented with cogency and coherence**
- **Clarity of understanding and good judgement to test internalization of knowledge.**
- **Viva-voce**

#### Prescribed Books:

A textbook on Knowledge Traditions and Practices of India Part - II, by CBSE 2013-14.

## SYLLABUS OUTLINE

**Each module has a Survey Article, extracts from the Primary texts, exercises and activities. All the modules are to be covered during one year of study.**

### 1. Astronomy in India

18 Periods

The Beginnings of Indian Astronomy - The Early Historical Period-The Siddhāntic Era - The Kerala School - Other Post-Siddhāntic Developments

#### Primary Texts

Āryabhaṭa, Varāhamihira, Brahmagupta, Vaiśvара, Bhāskara, Parameśvara, Nilakaṇṭha Somayāji, Jyeṣṭhadeva, Śaṅkara Varman

## 2. Chemistry in India

18 Periods

Early Chemical Techniques, Atomism in *Vaiśeṣika*, Chemistry in Early Literature, The Classical Age, Laboratory and Apparatus

### Primary Texts

Vātsyāyana, Nāgārjuna, Al-Birūnī, Vāgbhaṭa – qualities of a teacher, disciple, disqualification of a disciple, location and building of the *rushshala* (laboratory), working arrangements of *rushshala*, material and equipment, Yaśodhara Bhaṭṭa-process of distillation, apparatus, *saranasamskara*, *saranataila*, Prafull Chandra Ray

## 3. Indian Literatures Part I - Introduction of Indian Literature

25 Periods

Rājaśekhara-various phases of Indian Literature: Ancient Period- Vedic Period, Middle period, Apabhraṅsha, Modern Period

### Primary Texts:

Bhakti Movement Āṇḍāl, Guru Gobind Singh, Guru NānakDev, Hāla, Ilaṅgō,

## 4. Indian Philosophical Systems

18 Periods

Mahātmā Buddha, ĀdiŚaṅkarācārya, Śrī Rāmānujācārya – concept and schools of Indian Philosophy Sāṃkhya, Yoga, Vaiśeṣika, Nyāya, Mimāṃsā, Vedānta, Sāṃkhya

### Primary Text

The central question of Indian Philosophy: Vedic thought, Cārvāka Darśana, Jaina Darśana, Bauddha Darśana, Sāṃkhya Darśana, Yoga Darśana, Nyāya Darśana, VaiśeṣikaDarśana, Mimāṃsā Darśana, Vedānta Darśana

## 5. Indian Traditional Knowledge on Environmental Conservation

18 periods

Nature, flora and fauna, Sacred groves, Reference in Manu Smṛiti: Vedic period and the cow, Bishnois and conservation, Tradition of resistance

### Primary Texts

Atharva-Veda, Mahābhārata, *Lalitavistara*: the birth of the Buddha, Bhāgavata Purāṇa, Kautilya's *Arthaśāstra*

## 6. LIFE SCIENCES (1): Ayurveda for Life, Health and Well-being

10 periods

Definition of Ayurveda, The Principles of Ayurvedic Healing, Treating diseases to restore health

### Primary Texts

The oath of Caraka, Individualizing Diet

## 7. LIFE SCIENCES (2): The historical evolution of medical tradition in ancient India

10 periods

Specialization into eight branches, The tradition of surgery, medical genetics in Ayurveda,

inoculation for smallpox, microbiology and parasitology, communicable diseases and epidemics,

An evolving pharmacopoeia, pluralistic approach to healthcare, cross-cultural interactions, A dynamic literary tradition, global resurgence of Ayurveda, contemporary status

**Primary Texts**

Dead body dissection, Rhinoplasty, Genetic basis of diseases, Communicable Diseases

**8. Mathematics in India**

**18 Periods**

First Steps, Early Historical Period, The Classical Period, The Classical Period, post-Āryabhaṭa, The Kerala School of Mathematics, Features of Indian Mathematics

**Primary Texts**

Yajur-Veda, Rāmāyaṇa, Baudhāyana's Śulbasūtras, Āryabhaṭa, Bhāskara, Severus Sebokht, Syria, Brahmagupta, Bhāskarācārya, Jyeṣṭhadeva

**9. Theatre and Drama in India**

**18 Periods**

Its Beginnings, Classical Period, Major Indian Dramatists: Bhasa, Kalidasa, Bhavabhuti, Medieval Period, Kutiyattam, Yaksagana, Bhavai, Jatra, Nautanki, Swang, Ramalila, Tamasa, Nacha, Pandavani, Modern Era

**Primary Texts**

Natyasastra, *Visnudharmottarapurana* -Khaṇḍa III, Bhakti Movement, Women Bhakti Poets



**Knowledge Traditions and Practices of India**  
**Syllabus and Outline**  
**Class XII (2022-23)**

**1. Agriculture: A Survey**

**10 Periods**

Agriculture in Prehistory and Proto history/ Textual Sources/ Types of Lands/ Rain-Fed and Irrigated Crops/ Implements/ Seed and Sowing/ Manures/ Pests and Their Management/ Cattle Management/ Horticulture and Arboriculture/ Fishing/ Agriculture and Society

Agricultural Heritage: Excerpts from Primary Texts

Rigveda/ Kṣīparāśara (c. 400 BCE) / Kauṣilya (3rd or 4th century BCE)/ Kaśyapiyakṣisukti (800 CE) / Vṛkṣāyurveda (c. 1000 CE) / Kṣīgītā (c. 1500 AD)

**2. Architecture: A Survey**

**16 Periods**

Early and Classical Architecture

Temple Architecture/ Rock-Cut Structures/ Monolithic Temples/ Constructed Temples/ Public and Private Architecture

Excerpts from Primary Texts

Viudharmottarapura / Kautilya's Arthasastra / Mayamata

**3. Dance: A Survey**

**(1) Classical Dance Forms**

**18 Periods**

Classical Period/ Middle Period/ Modern Period/ Classical Dance Forms / Bharatanatyam / Kathakali / Kathak / Kuchipudi / Manipuri / Orissi / Sattriya

Primary Texts on Dance in India: A Selection

Natyasastra (tr. Manomohan Ghosh) / Natyasastra/

Natyasastra Dance: A Survey

**(2) Folk Dance Forms**

**10 Periods**

Chau/ Bihu/ Rauf/ Padayani/ DolluKunitha/ Dandiya/ Ghumar/ Kalbelia/ Chau & fla/ Bhangra/ Giddha/ Garba/ Lava)i/ Bamboo Dance

**4. Education Systems and Practices: A Survey**

**23 Periods**

Goals of Indian Education/ Teaching and Learning/ the Teacher and the Student/ Centres of Education / Temples as First Schools / Gurukulas / Viharas and Universities/ Community-Supported Education/ The Continuing System

Primary Texts on Education in India: A Selection

Two Types of Knowledge and the Right Pupil / Mere Intellectual Knowledge is not enough/  
The Link between Teacher and Pupil / Teachers Invite Students to Come to Them/ Controlling  
the Mind and the Senses: the Goal of Indian Education/ Teacher's Directives to Students on  
their Completion of Study/What is a useful Life? / Hsuan-tsang's (Xuanzang) Impressions of  
Indian Education/ Hsuan-tsang's (XuanZang) Description of Nalanda University

Narratives of Indian Education in the 17th, 18th and 19th Centuries

An Italian Explorer's Record of Indian Education in the 17th Century/ A Description of Indian  
Education in the 18th Century/ The Teacher's Subsistence/ Respect for the Teacher/Physical  
Education and Sports/ Description of the University at Navadveep (Nuddeah) in Bengal in  
1791/ Love of Learning and Support for Education among Indians/ A Widespread Pre-  
Colonial Network of Indigenous Schools

## **5. Ethics: Individual and Social 18 Periods**

The Cosmic Order/ Buddhist Ethics/ Jain Ethics/ Sikh Ethics/ The Bhakti

Movement Primary Texts on Ethics: Individual and Social: A Selection

From Jain Granthas/ From Buddhist Granthas/ From Asoka's Edicts/ From the Kural (tr.  
P.S. Sundaram)

## **6. Martial Arts Traditions: A Survey 18 Periods**

Texts/ Practice of Martial Arts/ Stick Combat/ Kalarippayau Martial Arts Traditions: A

Selection from Primary Texts Wrestling in the Mahabharata / Mallapura / Marmasastram

## **7. Language and Grammar 20 Periods**

Languages of India/ Study of Language in India/ Disciplines of Language Studies in India/  
Classification of Speech-Sounds/ Theory of Grammar

Primary Texts on Language: A Selection

Reflections on Language from Vedic Sources/ Phonetics: Panini Siksā (tr. & ed., Manmohan  
Ghosh) / Nirukta (Etymology): The Nighantu and the Nirukta of Yaskācārya (tr. & ed.,  
Lakshman Sarup) / Patañjali's Mahābhāṣya (adapted from S.N. Dasgupta's translation)/  
Grammar, Language and Knowledge: Bhartrihari's Vakyapadiya, Brahmakanda, tr. K.A.  
Subramania Iyer

## **8. Other Technologies: A Survey 20 Periods**

Harappan Technologies/ Later pottery/ Glass/Water Management/ Textile Technology/  
Writing Technologies: A Selection from Primary Texts

Gemmology/ Water Management/ Textiles and Garments/ Perfumes and Cosmetics