

Ph.D. Entrance Test — Syllabus

Subject: Bharatiya Gyan Parampra (IKS)

This syllabus has been prepared for the Ph.D. Entrance Test in **Bharatiya Gyan Parampra (IKS)** at NITTTR Bhopal. Candidates are expected to demonstrate familiarity with the core terminology, textual sources, and conceptual frameworks of the areas listed below.

Unit 1: Foundations of Indian Knowledge Systems

- Caturdaśa Vidyāsthāna — the fourteen traditional branches of learning: Purāṇa, Nyāya, Mīmāṃsā, Dharmaśāstra, the six Vedāṅgas (Śikṣā, Vyākaraṇa, Nirukta, Chanda, Jyotiṣa, Kalpa), and the four Vedas (R̥gveda, Yajurveda, Sāmaveda, Atharvaveda).
- Upaveda-s — introductory overview of Āyurveda, Dhanurveda, Gāndharvaveda and Arthaśāstra as applied knowledge streams.
- The eighteen Purāṇas — their names and the five defining characteristics (Pañcalakṣaṇa): sarga, pratisarga, vaṃśa, manvantara, vaṃśānucarita.
- Vedāṅgas — their objectives and scientific character, with emphasis on phonetics (Śikṣā) and grammar (Vyākaraṇa) as the basis of accurate Saṃskṛta pronunciation and transmission.

Unit 2: Indian Philosophical Systems and Society

- Puruṣārtha — the fourfold goals of life: dharma, artha, kāma, mokṣa, with textual definitions of dharma from the Mahābhārata, Manusmṛti and Vaiśeṣika Sūtra.
- Āstika and Nāstika Darśanas — overview of Cārvāka, Jaina and Bauddha darśana (nāstika); Nyāya-Vaiśeṣika, Sāṃkhya-Yoga, Pūrvamīmāṃsā and Uttaramīmāṃsā/Vedānta (āstika).
- Pramāṇaśāstra — the means of valid knowledge: pratyakṣa, anumāna, upamāna, śabda, arthāpatti, anupalabdhī; the categories of pramātā, pramāṇa, prameya and pramā.
- Ancient Gurukula and centres of learning — Nālandā, Takṣaśilā, Vikramaśilā and other major institutions of classical India.
- Bhagavadgītā (daivī and āsurī sampat, Chapter 16), Rāmāyaṇa (Rāma as maryādāpuruṣottama) and Mahābhārata (Vidura-nīti) as sources of ethical and civilisational thought.
- Arthaśāstra — statecraft concepts: saptāṅga (seven limbs of the state), ṣaḍguṇa (six measures of policy), rājadharmā and yogakṣema.

Unit 3: Indian Astronomy (Jyotiṣa)

- Vedic measures of time — year, month, day; the lunar year of 354 days and the system of intercalary months.

- Pañcāṅga — the five elements of the Indian calendar: Nakṣatra, Tithi, Yoga, Karaṇa and Vāra; the Vikrama and Śālivāhana era systems and the National Calendar.
- Elementary overview of planetary computation in the Āryabhaṭīya, and the evolution of the planetary model from Āryabhaṭa to Nīlakaṇṭha.

Unit 4: Health and Well-being

- Āyurveda — historical development, key textual sources, and the foundational Doṣa-Dhātu-Mala Siddhānta; definitions of svastha (health), dinacaryā (daily routine) and ṛtucaryā (seasonal routine).
- Classification of disease (Ādhidaivika, Ādhyātmika, Ādhibhautika) and the broad scope of treatment approaches and clinical specialties in Āyurveda.
- Yoga — definition, Aṣṭāṅga yoga, and the health benefits of āsana, prāṇāyāma and meditation; yogic cleansing methods (Śaṭkarma).
- Brief introduction to the Siddha system — foundational Tridoṣa concept and its approach to preventive medicine.

Unit 5: Indian Architecture and Vāstu

- Elementary concepts of Hindu temple architecture — the Nāgara, Drāviḍa and Vesara styles.
- Representative ancient and medieval structures with elementary knowledge of style, period and presiding deity (e.g., Khajurāho, Koṇārka, temples of Aihole and Bādāmī).
- Traditional water storage and harvesting systems — stepwells, tanks and regional techniques such as those of Rajasthan and Bihar.
- Fundamentals of Vāstu Śāstra — elementary concepts only.
- Unit 6: Indian Mathematics
- Geometry in the Śulbasūtras — construction methods for perpendicular bisectors and squares; the Bodhāyana-Pythagorean theorem.
- The decimal place-value system and traditional systems of numeration — Āryabhaṭa, Bhūtasankhyā and Kaṭapayādi.
- Contributions of Āryabhaṭa (sine tables), Brahmagupta (zero, positive and negative numbers) and Bhāskara's Līlāvati (arithmetic and geometry).
- Overview of the Kerala School — Mādhava's series for π and the foundations of infinite series in Indian mathematics.

Unit 7: Chemistry and Metallurgy (Overview)

- Chemistry in classical medical texts — the concept of Mahābhūtas and the qualities of compound formation.
- Metallurgical heritage of India — the Arthaśāstra as an early text on the processing of gold, silver, copper, iron and other metals.

- Development of acids and bases in Indian chemistry, from organic plant-based sources to mineral acids of the medieval period.

Unit 8: Kalā — Indian Performing and Visual Arts

- Introduction to Bharata Muni's Nāṭyaśāstra and the Abhinaya Darpaṇa; the concept of Navarasa.
- Overview of the eight classical dance forms of India (Bharatanāṭyam, Mohiniyāṭṭam, Kathakalī, Kuchipudī, Kathak, Oḍissi, Maṇipurī, Sattriya).
- Classification of Indian classical music — Hindustānī and Carnatic systems; a general overview of the tāla system.
- Influence of the Rāmāyaṇa and Mahābhārata on Indian painting traditions (Madhubanī, Paṭacitra, Pahārī).

Unit 9: Ancient India and the World

- IKS influence in the Western world — impact of Saṃskṛta on ancient European languages and Indian philosophical influence on Greek thinkers (Socrates, Plato, Plotinus).
- IKS influence in South-East Asia — Indian-influenced kingdoms (Śrī Vijaya, Khmer, Pagan) and temple architecture (Angkor, Prambanan, Bāli).
- Influence of the Rāmāyaṇa, Mahābhārata and Sanskrit inscriptions on South-East Asian art, theatre and language.
- The global impact of Yoga — key figures who carried Indian thought to the West (Swami Vivekananda, Paramahansa Yogananda, Sri Aurobindo) and the influence of IKS on modern Western thinkers.