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RV COLLEGE OF ENGINEERING
Autonomous Institution affiliated to VTU
VII Semester B. E. Dec 25/Jan 26 Examinations
Humanities and Social Sciences Board
INDIAN KNOWLEDGE SYSTEM - HS271TA
(2022 SCHEME)

UG

Time: 03 Hours

Maximum Marks: 100

Instructions to candidates:

- Answer all questions from Part A. Part A questions should be answered in OMR sheet only.
- Answer FIVE full questions from Part B.

Q. No	Question	BTL	CO	Marks
1	What is the primary characteristic of the 'Srutis' in the IKS Corpus? A) Written records B) Oral tradition/Revelations C) Historical biographies D) Legal codes	1	1	1
2	Which of the following refers to the transition from traditional to western knowledge during the colonial period? A) Integration B) Epistemological shift C) Renaissance D) Vedic revival	2	1	1
3	Which Vedanga is specifically dedicated to the study of Phonetics and Pronunciation? A) Kalpa B) Nirukta C) Shiksha D) Chandas	2	1	1
4	The 'Ashtadhyayi', a foundational work on linguistics and grammar, was authored by: A) Pingala B) Panini C) Patanjali D) Bhartrihari	1	1	1
5	Which philosophical system (Darshana) primarily focuses on logic and epistemology? A) Samkhya B) Nyaya C) Yoga D) Vedanta	2	1	1
6	What does the term 'Tarka' refer to in the context of Indian Philosophical Systems? A) Devotional singing B) Dialectical reasoning C) Physical exercise D) Ritualistic sacrifice	1	1	1
7	How does Traditional Knowledge (TK) differ from Modern Scientific Knowledge in its approach to nature? A) TK is reductionist; Modern is holistic B) TK is holistic and community-based; Modern is reductionist C) TK is always documented; Modern is oral D) There is no difference	4	1	1
8	The 'Chanda Shastra' by Pingala is considered a precursor to which modern concept? A) Quantum Physics B) Binary mathematics and combinatorics C) Organic chemistry D) Civil engineering	4	1	1
9	Which component of the Vedic Corpus deals with the philosophical inquiries and the nature of the self (Atman)? A) Samhitas B) Brahmanas C) Aranyakas D) Upanishads	1	1	1
10	In the context of Metallurgy, the 'Wootz Steel' of ancient India is a classic example of: A) Imported technology B) Advanced Indigenous technology C) Decorative art only D) Accidental discovery	5	3	1
11	Which Indian system of medicine emphasizes the balance of Vata, Pitta, and Kapha? A) Siddha B) Unani C) Ayurveda D) Homeopathy	1	3	1

MODEL QUESTION PAPER INDIAN KNOWLEDGE SYSTEM (HS271TA)

12	The concept of 'Vastu Shastra' primarily applies IKS to which field? A) Metallurgy B) Architecture and Space Planning C) Linguistics D) Agriculture	1	3	1
13	In the Indian framework of knowledge, which term refers specifically to the "objects of valid knowledge"? A) Pramāṇa B) Prameya C) Saṃśaya D) Siddhānta	1	1	1
14	The <i>Aṣṭādhyāyī</i> by Pāṇini is structured into how many chapters, as its name suggests? A) Six B) Eight C) Ten D) Twelve	1	2	1
15	What is the literal meaning of 'Pratyakṣa' in the context of Indian Epistemology? A) Direct Perception B) Logical Inference C) Verbal Testimony D) Divine Revelation	2	1	1
16	Which ancient scholar is credited with pioneering binary arithmetic through the study of poetic meters? A) Aryabhata B) Brahmagupta C) Piṅgala D) Bhaskara	1	2	1
17	In Pāṇini's grammar, the <i>Maheśvara Sūtras</i> are primarily used for which purpose? A) Defining philosophical truths B) Organizing phonemes (sounds) into functional groups C) Calculating the distance of planets D) Prescribing ritual sacrifices	5	2	1
18	What initiates the process of logical inquiry in the Indian knowledge classification system? A) Pramā B) Saṃśaya (Doubt) C) Tarka D) Siddhānta	2	1	1
19	The concept of 'Shunya' (Zero) transitioned from a philosophical void to a mathematical digit due to its role as a: A) Holy symbol B) Placeholder in a place-value system C) Unit of weight D) Geometrical shape	4	2	1
20	Piṅgala's <i>Chandahśāstra</i> represents poetic meters using two types of syllables. They are: A) Svara and Vyanjana B) Laghu (Light) and Guru (Heavy) C) Dharma and Artha D) Atman and Brahman	2	2	1
21	Which <i>Pramāṇa</i> is considered the most fundamental and universally accepted across almost all Indian schools of philosophy? A) Pratyakṣa (Perception) B) Anumāna (Inference) C) Upamāna (Comparison) D) Śabda (Verbal Testimony)	1	1	1
22	The mathematical algorithm <i>Meru-Prastāra</i> found in Piṅgala's work is a precursor to which modern concept? A) Calculus B) Pascal's Triangle (Combinatorics) C) Trigonometry D) Logarithms	4	2	1
23	Which Vedanga is considered the "mouth of the Veda Purusha" because it deals with grammar? A) Shiksha B) Vyakarana C) Nirukta D) Kalpa	1	2	1
24	Pāṇini's method of defining grammar through concise rules is known as the: A) Mantra style B) Sūtra style C) Bhashya style D) Kavya style	2	2	1
25	Which is NOT a part of Panchāṅga? A) Tithi B) Nakshatra C) Rashi D) Yoga	1	1	1
26	The science of perfume-making is called A) Rasashastra B) Gandhayukti C) Alchemy D) Metallurgy	2	1	1
27	In ancient Indian trigonometry, sine was known as A) Jya B) Koti C) Bhuja D) Rekha	2	1	1
28	Wootz steel is known for its A) Low carbon B) Brittleness C) High carbon content D) Rusting	1	1	1

MODEL QUESTION PAPER INDIAN KNOWLEDGE SYSTEM (HS271TA)

MODEL QUESTION PAPER INDIAN KNOWLEDGE SYSTEM (HS271TA)

51	Intellectual Property Rights related to traditional knowledge aim to: A) Commercialize culture only B) Prevent misappropriation C) Restrict access D) Eliminate modern science	2	1	1
52	Which ancient text emphasizes ethical taxation and public expenditure? A) Nātyaśāstra B) Arthaśāstra C) Yoga Sūtras D) Upaniṣads	1	2	1
53	Safeguarding traditional knowledge is important to: A) Limit innovation B) Preserve cultural identity C) Promote superstition D) Stop globalization	5	2	1
54	Danda in ancient governance signifies: A) Charity B) Punishment and law enforcement C) Taxation D) Agriculture	2	1	1
55	Traditional Indian knowledge supports sustainability mainly through: A) Industrial growth B) Harmony with nature C) Maximum consumption D) Urban expansion	4	2	1
56	The Traditional Knowledge Digital Library (TKDL) was created to: A) Teach Sanskrit B) Protect Indian traditional knowledge C) Promote tourism D) Digitize manuscripts only	2	2	1
57	The UN SDGs align with Indian philosophy of: A) Bhoga B) Tyāga C) Sarvodaya D) Ahimsā only	1	1	1
58	Which concept ensures balance between power and justice in governance? A) Kośa B) Danda C) Dharma D) Mitra	4	2	1
59	The idea of <i>Lokasaṅgraha</i> in Indian thought emphasizes: A) Individual gain B) Social welfare C) Military dominance D) Royal luxury	1	2	1
60	Which element of the state ensures internal security? A) Kośa B) Danda C) Janapada D) Mitra	2	2	1

PART B

1 a	Explain the concept of the " Vedic Corpus " and describe how the <i>Vedangas</i> serve as supporting sciences for the study and preservation of the Vedas.	2	1	4
b	Explain the "holistic nature" of Indian Knowledge Systems and contrast it with the "reductionist approach" of modern Western scientific paradigms.	1	1	4
OR				
2 a	Discuss the structural organization of the Vedic Corpus, specifically differentiating between the <i>Samhitas</i> , <i>Brahmanas</i> , <i>Aranyakas</i> , and <i>Upanishads</i> .	1	1	4
b	Analyze the importance of the Traditional Knowledge Digital Library (TKDL) in protecting Indian traditional knowledge from biopiracy and misappropriation.	4	4	4
OR				
3 a	Explain the "Computational Grammar" of Pāṇini's <i>Aṣṭādhyāyī</i> , specifically discussing how his rule-based system (Sutras) functions like modern programming logic.	4	2	4
b	Evaluate the role of Acharya Piṅgala's <i>Chandahśāstra</i> in the development of the binary number system, focusing on the use of <i>Laghu</i> and <i>Guru</i> syllables.	5	2	4
OR				
4 a	Explain the "Triangle of Knowledge" consisting of Prameya, Pramāṇa, and Samśaya, and describe their role in the	1	1	4

MODEL QUESTION PAPER INDIAN KNOWLEDGE SYSTEM (HS271TA)

b	Indian framework of logical inquiry.			
b	Trace the historical development and Indian origin of the Concept of Zero (Shunya), highlighting its transition from a philosophical concept to a mathematical digit.	4	2	4
5 a b	The <i>Sulba Sūtras</i> reflect a transition from ritual practice to mathematical reasoning. Critically examine how religious requirements contributed to the growth of geometric knowledge in ancient India. Āryabhaṭa challenged traditional explanations of celestial phenomena. Assess the scientific importance of his astronomical ideas and their impact on later Indian and foreign scholars.	4 3	2 2	4 4
	OR			
6 a b	The Panchāṅga integrates astronomy with daily life. Evaluate its role as both a scientific document and a cultural guide in traditional Indian society. Wootz steel influenced global metallurgy. Assess its technological uniqueness and explain why it was highly valued outside India.	3 4	1 2	4 4
7 a b	Analyze how the Tridoṣa theory explains both physical and psychological health in Ayurveda. Analyze the significance of the 64 Kalās in understanding the social and economic life of ancient India.	4 4	3 3	4 4
	OR			
8 a b	Evaluate ancient Indian irrigation systems as examples of sustainable water management. Examine how Indian architecture demonstrates a balance between functionality and aesthetics.	3 3	3 3	4 4
9 a b	Examine the need for safeguarding traditional Indian knowledge in the age of globalization. Evaluate the relevance of dharma-based governance in the <i>Rāmāyaṇa</i> for contemporary public administration.	4 3	2 2	4 4
	OR			
10 a b	Analyze how traditional Indian governance principles promote sustainable development. Critically analyze how integrating IKS with modern governance frameworks can lead to sustainable and inclusive development.	3 4	4 4	4 4