JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2026

B.Tech-7th Semester (CSE/IT/BT/ECE/CE)

COURSE CODE (CREDITS):24B1WHS732 (3) MAX. MARKS: 15

COURSE NAME: Knowledge Systems in Ancient India

COURSE INSTRUCTOR: Ranjith Kallyani MAX. TIME: 1 Hour

Note:*(a)All questions are compulsory.*

(b) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

(c) Use of calculator is not allowed

Q.No	Question	CO	Marks
Q1	Identify the type of ***Anumana*** (inferences) in the contexts provided below and make a table in the following format. You don't have to write entire *Anumanas*. You may use corresponding letters. **Pūrvavat** | **Śeṣavat** | **Sāmānyatodṛṣṭa** | **Syllogism** | **Modus Ponens** a) Scientists observe a rapid fall in atmospheric pressure, increasing humidity, and the formation of dense storm clouds. Based on these presently observed conditions, they infer that a severe rainfall event is likely to occur in the near future. b) All substances that expand significantly when heated are affected by changes in temperature. This metal rod expands significantly when heated. Therefore, this metal rod is affected by changes in temperature. c) By observing the colour of a mango, one infers whether it is likely to be sweet or sour. d) A doctor observes a characteristic set of symptoms in a patient and infers the presence of an underlying viral infection.	CO 4	4
Q2	Identify the category of ***Saṃśaya*** provided below and make a table in the following format. Use corresponding letters instead of writing entire *Saṃśaya*,. **Nyāya (Akṣapāda Gautama/Gaṅgeśa)** | **Buddhist (Nāgārjuna)** | **Hyperbolic Doubt (Descartes)** | **None of them** a) A newly detected astronomical object exhibits an unusually high mass, intense gravitational effects, and periodic emissions of radiation. However, the available observational data are compatible with two interpretations and the scientists doubt- is the object a neutron star or a black hole? b) If black holes can evaporate completely through Hawking radiation, apparently destroying information about the physical state that formed them, how can this be reconciled with the quantum mechanical principle of unitarity, according to which information cannot be fundamentally lost? c) Over several decades, global temperature records indicate a significant warming trend. However, climate systems are influenced by multiple factors, including volcanic activity, solar variation, oceanic cycles, and the **Please Turn Over**	CO 5	6

	accumulation of greenhouse gases resulting from human activity. Actually, is the observed increase in global temperature primarily the result of natural climatic variation or anthropogenic greenhouse gas emissions? d) An AI system trained on large volume of scientific data identifies a previously unnoticed pattern and generates predictions that appear to be highly accurate. Researchers therefore begin to treat the system as a reliable tool for scientific discovery. But what validates the reliability of the AI system itself? If another model, dataset, experiment, or system is required to establish its reliability, what establishes the reliability of that further means of validation? e) Is the accelerating expansion of the universe caused by a cosmological constant, or by some unknown form of dynamical energy? f) A scientific community accepts a highly sophisticated instrument as a reliable means of observing phenomena that cannot be directly perceived by human senses. The instrument has been calibrated, tested repeatedly, and its results have been compared with those produced by other instruments and experimental methods. However, each of these procedures also depends upon further instruments, standards, measurements, theoretical assumptions, and accepted methods of validation. If the reliability of an instrument is established only through other means of knowledge that themselves require validation, what ultimately establishes the validity of the original instrument as a means of knowledge?		
Q3	Read the cases provided below. Identify them as ***vada, jalpa***, or ***vitanda***, and make a table accordingly. **Explain your reasoning.** a) Two scientists disagree about whether an AI system can be considered reliable for scientific discovery. One argues that its reliability depends on the reproducibility of its results, while the other argues that reproducibility alone is insufficient and that interpretability is also necessary. Both carefully examine each other's arguments, accept valid objections, and revise their positions where necessary, with the shared aim of arriving at the most defensible conclusion. b) Two researchers debate whether governments should use AI-based surveillance systems. Each presents arguments and evidence, but their primary objective is to defeat the other in the debate. They selectively highlight weaknesses in the opponent's arguments, ignore evidence that supports the opposing position, and employ rhetorical strategies to secure victory. c) Two ethicists debate whether heritable human gene editing should ever be permitted. One initially defends a complete prohibition, while the other supports limited use for preventing serious genetic diseases. As the discussion proceeds, each distinguishes therapeutic applications from enhancement and accepts that the original position was too broadly formulated. By the end, both arrive at a revised position that neither initially held.	CO 2	5

JUNE-JULY EXAMINATIONS 2026