KADISARVAVISHWAVIDYALAYA

B.Sc. As Per NEP

IndianKnowledgeSystem

Courses

forSemester1

W.E.F.June2023

KADISARVAVISHWAVIDYALAYA

Indian Knowledge System-1

IKS202-1C Indian Astronomy-I

LEARNINGOUTCOMES:

- Understanding the universe explained in the Upanishads by ancient scholars like Aryabhata and Brahmagupta.
- Be acquainted with the Indian knowledge system that weaves together threads of ancient wisdom and scientific discovery.
- Inspirational drive to know and understand through the treasure trove of Indian knowledge systems, where science and spirituality converge to illuminate the path to enlightenment with potential applications in our daily lives.

TEACHINGANDEVALUATIONSCHEME:

Subject Code	Subject Title	Teaching Scheme	Credits	Examination Scheme			Total Marks
				Hrs.	Max Marks		
		Theory Per Week			CCE	SEE	
IKS202-1C	Indian Astronomy-I	2	2	2	25	25	50

Unit1:Historical Introduction & Celestial Sphere **TeachingHours:15**

Introduction, Ancient Indian Astronomy, The Vedic Period and Vedāngajyotiṣa, Siddhanta, Aryabhaṭa I (476 AD), Astronomers after Aryabhata,Contents of the Siddhantas, Continuity in AstronomicalTradition, Diurnal Motion of Celestial Bodies, Motion of Celestial Bodies Relative to Stars, Celestial Horizon, Meridian, Pole Star and Directions, Zodiac and Constellations, Equator and Poles (Viṣuvad vṛtta andDhruva), Latitude of a Place andAltitude of Pole Star, Ecliptic and the Equinoxes

Unit2:Co-ordinate Systems & Rāsiand Nakṣatra Systems **TeachingHours:15**

Introduction, Celestial Longitude and Latitude (Ecliptic System), Right Ascension and Declination (Equatorial System), Azimuth and Altitude (Horizontal System), Hour Angle and Declination (Meridian System), Phenomenon of Precession of Equinoxes, Ancient Indian References tothe Precession, Effects of Precession on Celestial Longitude, Tropical (Sayana) and Sidereal (Nirayana) Longitudes, Zodiac and Rāsis, Nakṣatra System

• *ContinuousEvaluation:ItconsistsofAssignments/Seminars/Presentations/Quizzes/SurpriseTests

Referencebooks:

1) Indianastronomy:AnintroductionbyS.BalachandraRao,UniversitiesPress(India)Ltd,Hyderabad

2) THE ARYABHATI of ARYABHATA: An Ancient Indian Work on Mathematics and Astronomy, Walter Eugene Clark, The Univeristy of Chicago Press, Illinois
3) Indian Astronomy- A source book (Based primarily on Sanskrit Texts), Compiled by B V Subbarayappa & K V Sharma, Nehru Center, Bombay.