



KADI SARVA VISHWAVIDYALAYA

Indian Knowledge System -2

IKS207-2C Indian Astronomy-II

(BBA / BCA / B.Sc All Semester 3)

**KADI SARVA
VISHWAVIDYALAYA,
GANDHINAGAR**



B.Sc. Curriculum as Per NEP

**IKS Subject Syllabus
Semester 3**

W.E.F. June 2024



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LEARNING OUTCOMES:

- Understanding the universe explained in the Upanishads by ancient scholars like Aryabhata and Brahmagupta.
- Be acquainted with the Indian knowledge system about the Yuga System, Solar Year and Lunar Year.
- Inspiring to know and understand the Gregorian Calendar, Hindu Calendar, Islamic Calendar, Indian Calendar and Pancanga as well as Direction/Place/Time, Eclipses of Sun/Moon/Star-planet of the Indian Astronomy systems for the potential applications in our daily lives.

TEACHING AND EVALUATION SCHEME:

| Subject Code | Subject Title | Teaching Scheme | Credits | Examination Scheme | | | Total Marks |
|--------------|---------------------|---------------------|---------|--------------------|-----------|-----|-------------|
| | | Theory Hrs Per Week | | Hrs. | Max Marks | | |
| | | | | | CCE | SEE | |
| IKS207-2C | Indian Astronomy-II | 2 | 2 | 2 | 25 | 25 | 50 |

Unit 1: Calendars and Pancanga

Teaching Hours: 15 (Weightage 50%)

Introduction, Gregorian Calendar, Hindu Calendar, Islamic Calendar, Indian Calendar and Pancanga.

True Positions of Sun, Moon and Star-Planets

Introduction Epicyclic theory, equation of Centre for the Sun and the Moon, True daily motions of the Sun, the Moon and star-planets.

Unit 2: Triprasna-Direction, Place and Time

Teaching Hours: 15 (Weightage 50%)

Introduction, determination of North-South Line, Finding Latitude & co-latitude of a place, Rising and Setting Points of the Sun, Times of Sunrise and Sunset, Rising of Signs of the Zodiac, Determination of Lagna at a given Time and Place,

Eclipse

Lunar Eclipse, Solar Eclipse

- *Continuous Evaluation: It consists of Assignments/Seminars/Presentations/Quizzes/Surprise Tests

Reference books:

- 1) Indian astronomy: An introduction by S. Balachandra Rao, Universities Press (India) Ltd, Hyderabad
- 2) THE ARYABHATI of ARYABHATA: An Ancient Indian Work on Mathematics and Astronomy, Walter Eugene Clark, The University 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.