PITHAPUR RAJAH'S GOVERNMENT COLLEGE (AUTONOMOUS): KAKINADA

CERTIFICATE COURSE

ACADEMIC YEAR 2025-2026

I B.Sc. PHYSICS-MAJOR

COURSE TITLE: INTRODUCTION TO INDIAN KNOWLEDGE SYSTEMS

DEPARTMENT OF PHYSICS AND ELECTRONICS

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Dt. 05 .01.2026

From

Dr. M.Surekha

Lecturer in Physics

P.R. Govt. College

Kakinada.

To

The Principal,

P.R. Government College (A)

Kakinada

Sir,

Sub: Dr. M.Surekha , Lecturer in Physics – wants to conduct a certificate course – on Indian Knowledge System in Science- for the Ind year Physics students - from 07.01.26 – requesting for granting the permission– reg.

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I may be permitted to bring the above cited matter to your kind notice that I want to conduct a certificate course on "Indian Knowledge System" for the I nd year Physics students from 07.01.26. So I request you to kindly grant me the permission to run the mentioned certificate course. I am here with enclosing the syllabus, blue print and Question bank for the above certificate course.

Thanking you.

Yours faithfully

M. Surekha

(Dr. M.Surekha)

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COURSE TITLE: INTRODUCTION TO INDIAN KNOWLEDGE SYSTEMS

Focus Area/Subject Area: Indian Knowledge Systems

Course Objective:

1. To introduce briefly different areas of IKS to the students including research methods.

2. To give a brief overview of selected areas of IKS, astronomy, literature and arts, agriculture-food and Ayurveda, architecture and civil engineering.

Learning Outcome:

1. Students undetrstand the various pramanas used in Indian Knowledge System.

2. They have been introduced to some fields of IKS like Astronomy, Arts, Ayurveda and Architecture.

3. They can explore the different fields of study in IKS further with the references and the resources provided during the course.

SYLLABUS

Module 1 (10 hours)

Astronomy and mathematics

- Introduction to various fields in traditional Indian Knowledge system. Methods and sources.
- Ancient Indian Observational astronomy. Foundation concepts - nakṣatra, graha, time units, phenomena like meteors, eclipses.
- Mathematical thinking - numerical and spatial thinking, śulbasūtra, zero, sundials, water clock, time measurement.

Module 2 (10 hours)

Language, literature and Art

- Formation of words in saṃskṛta and some ideas from Pāṇini and Patañjali. Technical words and examples of their usage.
- Music Vedic chants, sāma, some concepts in ancient treatises like nāradīyaśikṣā nāṭyaśāstra. Basics of related concepts like dance, meter and rasa in poetry.

Module 3 (5 hours)

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Module 3 (5 hours)

Earth and Atmosphere

- Anomalous phenomena, Earthquakes, clouds, rainfall, soil, agriculture and food science

Module 4 (10 hours)

Architecture and Civil Engineering

- Sindhu-Sarasvatī cities, description in purāṇa, arthaśāstra. A glance at select texts like nāradaśilpa, mayamata, mānasāra.

Module 5 (10 hours)

Material science

- Knowledge and use of various materials in āyurveda, rasaśāstra and vāstuvidyā.

References:

1. Dikshit, S. B. (1969, 1981). Bharatiya Jyotish Sastra (in Marathi) Poona (1896). (Transl. RV Vaidya, Vol.1). New Delhi: Government of India Press.

2. Iyengar, R. N. (2016) Astronomy in Vedic texts, History of Indian Astronomy, A Handbook - Volume brought out on the occasion of IX International Conference on Oriental Astronomy November 14–18.

3. Iyengar, R. N. (2013). Parāśara Tantra (Ed. Text, Trans. & Notes), Bangalore: Jain University Press.

4. Iyengar, R. N.; Sudarshan, H.S. and Anand V (2019). Vrddhagārgīya Jyotiṣa (Part1). Tattvadīpaḥ, Journal of Academy of Sanskrit Research, Melkote, 25 (1). 60–81.

5. Sastry T.S. K (Ed.). (1984). Vedānga Jyotiṣa of Lagadha, Indian Journal of History of Science, 4) Supplement, 1–74.

6. Sen, S. N., and Shukla, K. S. (Ed.) (2000). History of Astronomy in India, 2nd Revised Edition. New Delhi: Indian National Science Academy.

7. Thompson R.L. (2007) The Cosmology of the Bhāgavata Purāṇa (First Indian Edition) MLBD Publn. Delhi.

8. Iyengar, R.N; Kannan K.S; Wakankar S. Y. (2018) Nārada Śilpaśāstra - Sanskrit Text on Architectural Civil Engineering, Jain University Press.

9. Bruno Dagens (2000) Mayamatam, IGNCA.

10. Ayachit S.M (Tr.) (2002) Kashyapiyakrishisukti: A Treatise On Agriculture By Kashyapa, Asian Agri-history Foundation.

11. Sadhale, Nalini (Tr.) (1999) Krishi Parashara (Agriculture by Parashara), Asian Agri-History Foundation.

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Module 1 (10 hours)

Astronomy and mathematics

1. What is Traditional Indian Knowledge System (IKS)?

IKS refers to the accumulated knowledge, practices, and skills developed in India over thousands of years.

It includes:

- Scientific knowledge
- Philosophical systems
- Practical life skills

It is **holistic** — connects science, spirituality, and daily life.

2. Major Fields in Traditional Indian Knowledge System

1. Astronomy (Jyotiṣa)

- Study of stars, planets, and time
- Used for:
  - Calendars
  - Agriculture
  - Ritual timings

2. Mathematics (Gaṇita)

- Number system and calculations
- Contributions:
  - Zero
  - Decimal system
- Key scholar:
  - Aryabhata

3. Medicine (Āyurveda)

- Traditional system of healthcare
- Focus on balance of body (doṣas):
  - Vāta, Pitta, Kapha
- Famous scholar:
  - Charaka

4. Yoga and Philosophy

- Physical and mental well-being
- Includes:
  - Meditation
  - Ethics
  - Self-realization
- Based on texts like Yoga Sutras

5. Architecture (Vāstu Śāstra)

- Science of building design
- Focus on:
  - Direction
  - Energy flow
  - Harmony with nature

6. Arts and Literature

- Music, dance, drama
- Example:
  - Natya Shastra

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7. Agriculture and Environmental Knowledge
- Seasonal cycles
- Water management
- Sustainable farming methods

3. Methods of Knowledge in IKS

Traditional Indian knowledge was developed using **systematic methods:**

1. Observation (Pratyakṣa)
- Direct observation of nature
- Example:
  - Studying star movements
  - Observing seasons

2. Inference (Anumāna)
- Logical reasoning based on observation
- Example:
  - Predicting rain from cloud patterns

3. Scriptural Authority (Śabda / Āgama)
- Knowledge from trusted texts and teachers
- Passed through **Guru–Śiṣya tradition**

4. Experimentation and Practice
- Practical application
- Example:
  - Testing medicines in Ayurveda
  - Constructing altars in geometry

4. Sources of Traditional Indian Knowledge

1. Vedas
- Oldest texts of India
- Contain knowledge of rituals, nature, and philosophy

2. Vedāṅgas
- Auxiliary disciplines to understand Vedas
- Includes:
  - Jyotiṣa (astronomy)
  - Śikṣā (phonetics)

3. Śāstras
- Scientific and technical texts
- Examples:
  - Arthaśāstra (economics)
  - Dharmaśāstra (law)

4. Siddhāntas
- Astronomical treatises
- Mathematical models of planetary motion

5. Guru–Śiṣya Tradition
- Oral transmission of knowledge
- Learning through close teacher-student interaction

6. Inscriptions and Archaeological Evidence

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- Temple inscriptions
- Ancient instruments
- Manuscripts

2. Ancient Indian Observational Astronomy

Key Concept: Jyotiṣa

- Study of celestial objects and their motions
- Used for calendars, rituals, agriculture

Nakṣatra (Lunar Constellations)

- Sky divided into **27 nakṣatras**
- Moon passes through each in ~1 day
- Examples:
  - Aśvinī
  - Rohiṇī
  - Mṛgaśīrṣa

👉 Used to track time and predict seasons

Graha (Celestial Bodies)

- "Graha" means "seizer"
- Includes:
  - Sun (Sūrya)
  - Moon (Candra)
  - Planets visible to naked eye

Time Units

Traditional units:

- Nimeṣa – blink of eye
- Muhūrta – 48 minutes
- Tithi – lunar day
- Pakṣa – fortnight
- Māsa – month
- Saṁvatsara – year

Astronomical Phenomena

Meteors

- Called "ulkā"
- Seen as fiery streaks in sky

Eclipses

- Scientific understanding present:
  - Lunar eclipse: Earth's shadow on Moon
  - Solar eclipse: Moon blocks Sun

Ancient explanation also involved mythological figures like Rahu and Ketu.

3. Mathematical Thinking in Ancient India

Numerical Thinking

- Development of number system
- Place value system
- Concept of infinity and large numbers

Spatial Thinking

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- Geometry used in altar construction
- Precise measurements and shapes

Śulbasūtras

- Ancient texts on geometry
- Used for constructing fire altars

Key Contributions:

- Early form of **Pythagorean theorem**
- Knowledge of squares, rectangles, circles

Concept of Zero

- One of India's greatest contributions
- Formalized by:
  - Brahmagupta

Importance:

- Enables place value system
- Foundation of modern mathematics and computing

4. Instruments for Time Measurement

Sundial

- Uses shadow of Sun
- Measures time during day

Water Clock (Ghati Yantra)

- Measures time using water flow
- Used in temples and observatories

Time Measurement Importance

- Agriculture cycles
- Religious rituals
- Calendar making

Module 2 (10 hours)

Language, literature and Art

Introduction to Various Fields in Traditional Indian Knowledge System (IKS)
Methods and Sources

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- Scientific knowledge
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- Practical life skills

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- Anumāna
- Śabda

- Use headings in answers for better marks

PART 1: Formation of Words in Saṃskṛta

1. Basics of Word Formation

In Sanskrit, words are formed systematically using:

- **Dhātu (root)** → basic meaning
- **Pratyaya (suffix)** → modifies meaning
- **Upasarga (prefix)** → adds nuance

Example:

- **गम्** (gam) = to go
- **गच्छति** (gacchati) = he goes

2. Types of Word Formation

1. Derivation (Kṛdanta)

- Words formed from roots using suffixes
- Example:
  - पठ् (paṭh) → पठक (reader)

2. Nominal Derivation (Taddhita)

- Derived from nouns
- Example:
  - ग्राम (village) → ग्राम्य (rural)

3. Compounds (Samāsa)

Combining words into one:

Type	Example	Meaning
Tatpuruṣa	राजपुत्र	king's son
Dvandva	माता-पिता	mother and father
Bahuvrīhi	चक्रपाणि	one who has a discus

4. Sandhi (Euphonic Combination)

- Sound changes when words join
- Example:
  - राम + इति → राम इति

3. Ideas from Pāṇini

Aṣṭādhyāyī

- A systematic grammar with ~4000 rules
- Based on concise **sūtras**

Key Ideas:

- Language follows **rule-based structure**
- Use of **meta-rules (paribhāṣā)**
- Efficient and scientific grammar system

Considered one of the earliest forms of **formal linguistic analysis**

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Mahābhāṣya

- Commentary on Pāṇini's grammar

Key Concepts:

- Importance of **correct pronunciation**
- Meaning depends on **context and usage**
- Grammar connected to **communication and clarity**

5. Technical Terms (with Examples)

Term	Meaning	Example
Dhātu	Root	गम् (go)
Pratyaya	Suffix	ति in गच्छति
Samāsa	Compound	देवालय
Sandhi	Sound joining	तत् + एव = तदेव
Śabda	Word	राम

PART 2: Music in Indian Tradition

1. Vedic Music

Vedic Chants

- Recitation of Vedas with **specific tones**
- Important for preserving accuracy

Sāma Veda

- Known as the **foundation of Indian music**
- Uses melody in chanting

2. Ancient Treatises

Nāradīya Śikṣā

- Discusses:
  - Sound production
  - Musical notes (svara)

Nāṭya Śāstra (by Bharata Muni)

Covers:

- Drama
- Dance
- Music

3. Basics of Dance

Key Elements:

- **Nāṭya** – drama
- **Nṛtta** – pure dance
- **Nṛtya** – expressive dance

Combines:

- Movement
- Expression
- Rhythm

4. Meter (Chandas)

- Study of poetic rhythm
- Based on syllable patterns

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CERTIFICATE COURSE

ATTENDANCE

S.NO	NAME OF THE STUDENT	07-01-2026	08-01-2026	09-01-2026	19-01-2026	20-01-2026	21-01-2026	22-01-2026	23-01-2026	24-01-2026	27-01-2026	28-01-2026	29-01-2026	30-01-2026	02-02-2026	03-02-2026	04-02-2026	05-02-2026	06-02-2026	07-02-2026	09-02-2026	10-02-2026	11-02-2026	12-02-2026	13-02-2026	16-02-2026	17-02-2026	18-02-2026	19-02-2026	20-02-2026	21-02-2026	23-02-2026	24-02-2026	25-02-2026	26-02-2026	27-02-2026
25PHY01	SANGANI RAMAKRISHNA VARMA	P	P	A	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25PHY02	DHANISETTI ARYAN ANAND PAUL	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25PHY03	UPPALAPU PRASANNA ESWAR	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P
25PHY04	K.N.SATYANARAYANA MURTHY	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25PHY05	PESINGI DURGAPRASAD	P	P	P	P	A	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25PHY06	MULIKI SANDHYA KUMARI	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25PHY07	EMANDI GOWTHAMI	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	A	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P
25PHY08	VELUGUBANTLA VENKATESH	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P
25PHY09	PADALA BHANU	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25PHY10	PYLA SHANMUKHA SRI SAI	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25PHY11	RACHA DINAKAR	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25PHY12	DODDI PRAVEEN KUMAR	P	A	P	P	A	P	P	P	P	P	P	P	A	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P
25PHY13	NARSING SURENDRA ,	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	A	P	P	P	P	P	P	P	P

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25PHY14	THUMU VEERA VENKATA NAGA SAI PARAMESH	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25PHY15	YALAMANCHILI NARA SIMHA MURTHY	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25PHY16	VENNA SWAMI	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25PHY17	UMMIDI RAVITEJA	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25PHY18	KASIREDDY SATYA SAI KRISHNA	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25PHY19	VELUGANTI MANIKANTA	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25PHY20	GARIKAPATI VIJAYA JAGAN	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25PHY21	PILLI YASHWANTH	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25PHY22	YELUGULA MANIKANTA	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25PHY23	BURRA RAMBABU	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25PHY24	AGRAHARAGAPU VAMSI	P	P	P	P	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25PHY25	POKANATI VIJAY	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25PHY27	NAKKA RADHIKA GAYATHRI	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	A	P	P	P	P	P	P	P
25PHY28	MARRI TEJASWINI	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	A	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25PHY29	DARAL CHARAN	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P
25PHY30	PEMMADA ANATHA VENKATA SAI RAM	A	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	A	P

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25PHY31	NAGULAPALLI MARUTHI MANIKANTA VENKATA	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25PHY32	MYLAPALLI JYOTHI	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25PHY33	KOMMOJU CHITTI JYOTSNA	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P
25PHY34	JALLA NAGAMANI	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25PHY35	POLARAPU DURGA BHAVANI	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P
25PHY36	RAGAM PRAVEEN	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25PHY37	MASIRAPU SATISH	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25PHY38	AJJARAPU VINEETH KUMAR	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P
25PHY39	SHAIK ABDUL AMIRUNNISA	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	A	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P
25PHY40	KAJULURI ANITHA	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P
25PHY41	GANDI PUSHPALATHA	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25PHY42	CHITIKELA KUMARA SWAMY	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25PHY43	CHALLA JAGADEESH SURYA	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25PHY44	ANKAMREDDY BHARGAVI	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25PHY45	ADABALA AKHILESWAR	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25PHY46	TURRAM DINESH	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P

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25PHY47	NUTHALAPATI KEERTHANA	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25PHY48	SABBAVARAPU VARALAKSHMI	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P
25PHY49	SODI GANESH	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25PHY50	YADALA KARTHIK	P	P	A	P	A	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P
25PHY51	KORIPALLI NAGARJUNA	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P
25PHY52	MAILA KARUN KUMAR	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P
25PHY53	PALLA OM VEERA VENKATA PRASAD	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P
25REM01	PENTAKOTA HARSHA SRI SAI GANESH	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25REM02	VYDADI VEERA BABU	P	P	P	P	P	P	A	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P
25REM03	TALATAM VEERA SUBRAHMANYAM	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P
25REM04	KADAJARI LAKSHMI DEVI	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25REM05	SIRAPU LAKSHMI	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25REM06	JOGIMAHANTHI SAI MANOHAR	P	P	P	A	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	A	P	P	P	P	P
25REM07	GUTHULA SIVA SANKARA SAI KUMAR	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25REM08	KOPPADI SIMHADRI	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25REM09	VALLU VENKATA PURNESH	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P

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25REM11	PEMMADI JAGAN	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25REM13	SANNIDOYINA SATISH	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P
25REM15	MAGAPU NAVADEEP	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P

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