

# **INDIAN SLEEP DISORDERS ASSOCIATION**



## **PROSPECTUS**

**FELLOW OF SLEEP MEDICINE  
UNDER THE AEGIS OF  
INDIAN SLEEP DISORDERS ASSOCIATION  
(FSM-ISDA)**

# EXECUTIVE COMMITTEE ISDA

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# EXECUTIVE COMMITTEE OF THE COLLEGIATE OF SLEEP MEDICINE

***Founder President & Chairperson:***

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Dr Manjari Tripathi  
Dr Preeti Devnani  
Dr Jyotsna Joshi  
Dr Suresh Kumar**

# INTRODUCTION

As till date there is no formal teaching of Sleep Medicine in the M B;B.S. course curriculum the ISDA Executive committee has decided to allow students who have gained knowledge & skills in Sleep Medicine through any of the streams defined in the application form fo to take the examination and award a certificate of competence .

FMS- ISDA is recognised within the profession in India, there being no other such examination or recognition. This allows recognition thus encouraging the development of the discipline of sleep medicine in India.

The examination is aimed to be a **proof of excellence**.

The Multiple Choice Examination is knowledge-based only.

Candidates have **3 hours** to answer **100 questions**

Upon successfully passing the theory examination with a minimum of 50% marks the candidate has to appear for an oral examination where one is evaluated by a team of examiners nominated by the Association from its fellows comprising of two Neurologists and two pulmonary physicians with special interest and active practice in the discipline.

Upon successful completion a **Fellow in Sleep Medicine of the Indian Sleep Disorders Association will** be conferred.

Objectives of training and competence desired for award of FSM-ISDA:

1. Appropriate clinical decision-making, i.e. learning various skills in the choice and implementation of diagnostic tests and therapeutic interventions
  - the ability to interview the patient correctly
  - to recognize symptoms and signs
  - procedure skills
  - to decide on using appropriate questionnaires, scales, inventories, and laboratory tests
  - to schedule a treatment plan
2. Should also have
  - Sound medical knowledge of the subject

- Communication skills
- Coordinate and taking responsibility for multidisciplinary interactions **'interdisciplinary'** or **'integrative sleep medicine'**
- research methodology
- to manage a sleep medicine centre

Areas of competence desirable for the examination:

- A.** Physiological basis of sleep
- B.** Assessment of sleep disorders and diagnostic procedures
- C.** Insomnia
- D.** Sleep-related breathing disorders
- E.** Hypersomnias
- F.** Circadian rhythm sleep disorders
- G.** Parasomnias
- H.** Sleep-related movement disorders
- I.** Miscellaneous sleep-related conditions and disorders
- J.** Societal, economical, organisational and research aspects of Sleep Medicine

## **Fellow of Sleep Medicine under the aegis of the Indian Sleep Disorders Association (FSM-ISDA)**

### **Guidelines:**

The examination is organized and conducted by the Indian Sleep Disorders Association (ISDA). The ISDA will award the successful candidates “Fellow of Sleep Medicine of the Indian Sleep Disorders Association” (FSM-ISDA).

The aim of the examination is to set a benchmark in the knowledge of the individual in sleep. The certificate is a testimonial verifying that the knowledge of the person holding the certificate is a proof of competence in the discipline.

### **Eligibility criteria for candidates**

- a. MBBS doctor registered with the MCI, DMC or the State Medical Council.  
*Attested copy of MBBS and current valid registration certificate to be submitted.*
- b. A recognized post graduate degree or Diplomate National Board (diploma-not eligible) in General Medicine, Respiratory Medicine, ENT, Psychiatry or Pediatrics are eligible.  
*Attested copy of degree to be submitted.*
- c. Those who have completed post doctoral training in Pulmonary, Critical Care & Sleep Medicine or Neurology, are eligible.  
*(Copy of 1. DM degree, 2. Letter from HOD/ Guide of the department /centre of training)*

**FOR DETAILS OF ELIGIBILITY CRITERIA AND REQUIREMENTS FOR TAKING THE EXAMINATION YOU ARE REQUESTED TO REFER TO THE APPLICATION FORM AVAILABLE ON THE WEBSITE**

### **Centers validated for training candidates should have**

- a. Practitioners of Sleep Medicine holding the Fellowship conferred by the ISDA in recognition of their contribution to the advancement of Sleep Medicine in India.  
**ISDA to verify**
- b. Centers could be primary sleep centre/ neurology unit/ respiratory unit undertaking regular all night full PSG at least 30 PSG/month. The Centre may be undertaking home PSG testing in addition to full night PSG but no centre performing only home PSG are eligible.  
**Validation by ISDA executive or Fellow.**
- c. Centre should be able to provide holistic training in various aspects of Sleep i.e. Respiratory Medicine, Neurology, Psychiatry, ENT & Dental.  
**Validation by ISDA or Fellow.**

- d. Must confirm to the eligibility criteria for centers validated by the Executive Committee of ISDA.

**Examination consist of two parts**

- a. Part I consist of 100 MCQ with single correct answer. The examination is of 3 hrs duration. Questions would be theoretical, practical, technical, case or PSG based from any part of the syllabus.
- b. The examination questions are selected from a question bank by the Chief Coordinator of Examination who is appointed by the Executive Committee.
- c. The question bank is prepared from questions contributed by all the fellows who forward the questions to the Chief Coordinator of the examinations.
- d. Candidate is required to get at least 50% marks to qualify for Part II of examination. Part II of the examination will be oral, problem / care based, viva voce and would consist of two stations with two examiners at each station.
- e. Part II of the examination would be of approximately 20 minutes or more at each station.
- f. Examiners would be from Respiratory Medicine and Neurology
- g. Candidates will be marked Fail, Just Fail, Pass, High Pass, and Excellent.
- h. A fail at any table is considered fail overall.
- i. Pass or better in both tables is Pass over all.
- j. Just fail in one station may be compensated by high pass or excellent at the other station.
- k. After completion of training the examination must be taken within two years (or in special cases after approval of the ISDA within 3 years). Those who are successful in Part I will be allowed to take the oral/ Practical examination.
- l. For Part I (theory) a total of 3 attempts will be allowed.
- m. For oral/ Practical – after clearing theory, two attempts will be allowed to clear the Part II examination. If the candidate fails to clear the oral exam in two attempts, he/she will be required to take the Part I exam again and will be allowed to take two final attempts to clear part II.

**Course/ Syllabus**

The course of the certificate is hosted on the website. (It is under constant review and could be modified as per needs and covers all aspects related to Sleep Medicine)

**Article/ Review article**

It is essential to write an original study report, article or review which should be submitted and passed by the editorial board of IJSM to be eligible to take the examination.

**Fees**

The Fees for the examination is Rs. 5000/- payable by demand draft to the ISDA.

**Examiners**

The panel of examiners is practicing sleep physicians who are Fellows of the ISDA.

**Frequency of Exam**

Presently the exam will be held annually during the annual sleep conference at the city where the conference is being held (Usually in the month of March or April – Good Friday weekend).

The examination process is under constant review and the format may be changed anytime. However, any change of the format would be notified on the Association website/ application booklet.

**Results**

Every attempt would be made to declare the names of the successful candidates (who have cleared both parts) in the conference during the 'Dinner Symposium'. The certificates would be mailed to the successful candidates.



## History of ISDA

The Indian Sleep Disorders Association (ISDA) was founded in the year 1995. A group of like minded physicians with interest in sleep medicine from different states of India floated the idea of starting a society at the National level. The lead was taken by Dr J C Suri who is credited to having established the first Sleep Laboratory in India at Safdarjang Hospital, New Delhi. The core group included Dr Parvati Gopal from Bangalore, Dr Vikram Sarbhai from Delhi, Dr R. Vijay Kumar from Hyderabad, Dr S K Sahu from Orissa, Dr R. C. Sahu from Mangalore and Dr Talib from Ahmednagar.

Members are drawn from varied disciplines like pulmonary medicine, neurology, internal medicine, psychiatry, pediatrics, ENT & Dentistry. The aim of the association is to disseminate knowledge on the current understanding of sleep disorders amongst medical professionals and the public.

The ISDA has been organizing conferences and workshops on a regular basis since December 2005. As a result of these efforts the membership of ISDA has risen from a modest 25 in 1995 to more than 225.

The Association started a journal in sleep medicine during the Conference held at New Delhi in Dec 2005 named "Indian Journal of Sleep Medicine". The journal is published quarterly and having completed five years should be receiving the certificate of indexing from the authorities shortly.

The Association has also for the first time awarded fellowships to a few senior members who have contributed significantly in the advancement of sleep medicine in the country.

In the year 2010 the Executive Committee selected a few centers of excellence in the discipline of sleep medicine in India. The committee was of the opinion there is a scarcity of trained sleep specialists in the country. In order to overcome this deficiency the Society started a one year training course at these centers culminating in an examination and award of a "Fellow of Sleep Medicine of the Indian Sleep Disorders Association". The first batch of students took the examination during the conference (SLEEPCON 2011) held at Nagpur in April 2011. The "Fellow of Sleep Medicine of the Indian Sleep Disorders Association" (FSM-ISDA) as of date may not have a legal recognition, however, under the present circumstances where there is no degree or diploma available for sleep medicine practitioners in the country, the FSM - ISDA is a valuable benchmark for young doctors who wish to pursue a practice in sleep medicine.

**FELLOW OF SLEEP MEDICINE**  
**UNDER THE AEGIS OF**  
**INDIAN SLEEP DISORDERS ASSOCIATION**  
**(FSM-ISDA)**

**COURSE CURRICULUM, SUGGESTED READING,  
REFERENCES & DETAILS OF SYLLABUS**

# FELLOW OF SLEEP MEDICINE

(ONE YEAR COURSE UNDER THE AEGIS OF INDIAN SLEEP DISORDERS ASSOCIATION)

## Course Curriculum

Sleep medicine is a rapidly growing specialty in the field of medicine that has become an essential specialty service in any clinical or academic institute. Over the past 25 years this field has expanded and developed immensely in order to diagnose and treat the increasing numbers of different sleep-related disorders. Many physicians think that sleep disorders means obstructive sleep apnea only, however, the International Classification of Sleep Disorders (ICSD-2005) included more than 84 disorders. As a result, the number of clinical sleep facilities needed to diagnose and treat patients with sleep disorders has increased worldwide and structured training programs have been implemented in developed countries.

Sleep Medicine is a distinct specialty that requires one year of fellowship training after completing pulmonary, psychiatry, pediatric, otolaryngology or neurology training. Specialists in this field are well trained in sleep physiology, respiratory physiology and EEG. Performing sleep studies in the sleep disorders center (SDC) enable the treating doctor to detect many pathological changes during sleep.

### **Objectives**

#### **A. Clinical Science of Sleep Medicine:**

1. The Sleep Medicine Fellow will develop thorough knowledge and sound judgment in the diagnosis, treatment and prevention of all sleep disorders
2. The Sleep Medicine Fellow must become competent with the technical skills necessary for the performance and interpretation of the diagnostic and treatment procedures used in sleep medicine.

#### **B. Research Skills of Sleep Medicine:**

1. The Sleep Medicine Fellow must become familiar with the different research designs and methodologies and data collections and analyses.
2. The Sleep Medicine Fellow will develop the needed skills to perform good quality clinical and basic science research in Sleep Disorders

#### **C. SDC Management:**

1. The Sleep Fellow will learn the administrative skills needed to run and manage a sleep disorders center

## Degree Requirements:

This is a (one year) fellowship program. One year for those who have completed MD/DM in Medicine/Pulmonary medicine/ Neurology /Pediatrics/ Psychiatry or MS ENT.

### *The following are the responsibilities and expectations of the fellow in training:*

- A. Interpret polysomnograms (PSG) at the SDC. This program requires a minimum of 150 PSG interpretations for sleep medicine fellowship completion, although there is ample opportunity for more.
- B. Interpret Multiple Sleep Latency testing (MSLT) at the SDC. (minimum 15 for the fellowship)
- C. Minimum 150 new patients and 150 follow-up patients must be documented in the fellow's log book throughout the sleep fellowship. At least 20 of the new patients must include a diagnosis other than sleep disordered breathing. Evaluation of at least 30 pediatric age patients is also required. The Fellows should be exposed to two half-day adult sleep clinics every week and a minimum of one half day sleep clinic every alternate week for pediatric patients. Fellows will also attend respective clinics in other sub-specialties.
- D. Take sleep lab call.
- E. Teach rotating residents, students and technicians.
- F. Write at least one article that is preferably a result of the fellow's sleep research project, which was ongoing throughout the sleep fellowship
- G. Must attend all sleep lecture series and complete required readings

## Program Structure

The fellowship program will be conducted in the SDC accredited by ISDA in 4 Semesters.

- A. **First Semester (4 months):** Pulmonary medicine training to develop good practical knowledge of applied pulmonary physiology, lung mechanics, pulmonary pathology and common respiratory diseases.
- B. **Second Semester (4 months): Neurology** – Basic principles, neuroanatomy, neurophysiology with respect to sleep wake generators and neurotransmitter functions along with neurology clinics with relevance to sleep disorders.
- C. **Third Semester (2 months):** The fellow would undergo training in ENT and learn the anatomical/physiological aspects of Nose/ Oropharynx in relation to sleep disorders.
- D. **Fourth Semester (2 months):** In psychiatry clinic where the fellow would be taught on the physiological bases of sleep and management of sleep problems secondary to Psychological disorders.

## Curriculum details

The sleep medicine training will take place during the 1-year sleep medicine fellowship program and the following syllabi would be covered.

- Orientation
  - Introduction to Polysomnogram interpretation
  - Introduction to the sleep laboratory
  - Introduction to Polysomnogram scoring
  - Sleep focused history and physical examination
  - Differential Diagnosis of Hypersomnia & Insomnia
- Sleep Clinics two half day (adult)/week and one half day clinic (pediatric) every alternate week with mentoring
  - Introduction to Sleep Medicine Research
  - Sleep Cardio-Pulmonary Disorders
  - Neuroscience, Clinical Neurology & EEG Interpretation
  - Otolaryngology, dental appliances, and allergies
  - Psychiatry, Psychology Clinics

The first 6 months conclude with an interim in-service oral, clinical and polysomnographic evaluation. The second 6 months will primarily be spent in Advanced Clinical Sleep Medicine, running a sleep medicine clinic under supervision, and advanced involvement in sleep medicine research. There will be another in-service written examination in the last month of the training period.

The fellow will be evaluated formally by his/her supervising faculty member after each clinical rotation and will meet with the program director to review these evaluations.

The fellowship ends with a written and oral viva examination held at the end of the year and would be at the SLEEPCON conference venue. The examiners would comprise of both examiners from the pulmonology, neurology and sleep medicine specialties as well as external examiners (invited speakers) for the conference. A non refundable exam fee of Rs.5000 would be collected from each candidate; payable in January, three months prior to SLEEPCON conference.

## Suggested Reading and References:

It is important to be familiar with the following resources:

1. AASM Scoring guidelines 2007.
2. Principles of sleep medicine 3<sup>rd</sup> Edition Kryger , Roth and Dement.
3. American Academy of Sleep Medicine, *International classification of sleep disorders: Diagnostic and coding manual* 2nd edition Ed: Westchester. IL: American Academy of Sleep Medicine, 2005.
4. American Board of Sleep Medicine. (Updated 2006; Cited o May 2008). Available from <http://www.absm.org/>
5. American Board of Internal Medicine. (Updated 2008; cited May 2008). Available from <http://www.abim.org/certification/policies/imss/sleep.aspx>
6. Common Program requirements: Sleep medicine. American Academy of Sleep Medicine (ACGME 2004); <http://www.aasmnet.org>.
7. American Academy of Sleep Medicine Accreditation Committee, *Standards for accreditation of a sleep disorders center*. March 2002; revised edition. Rochester, MN: American Academy of Sleep Medicine, 2002; <http://www.aasmnet.org>.
8. Standards of Practice Parameters: <http://www.aasmnet.org/PracticeParameters.aspx>
9. Standards of Practice Reviews: <http://www.aasmnet.org/ClinicalReviews.aspx>
10. Clinical Guidelines: <http://www.aasmnet.org/ClinicalGuidelines.aspx>
11. Sleep Medicine Practice Exam & Sleep Study Scoring Tests: <http://www.aasmnet.org/LearningCenter/Home.aspx>

Key journals with basic and clinical research emphasis in sleep medicine are listed below.

1. *Sleep*: <http://www.journalsleep.org/>
2. *Journal of Clinical Sleep Medicine*: <http://www.aasmnet.org/JCSM/>
3. *Sleep Medicine*: <http://www.sciencedirect.com/science/journal/13899457>
4. *Sleep Medicine Clinics*: <http://www.sleep.theclinics.com/>
5. *Sleep Medicine Reviews*: <http://www.sciencedirect.com/science/journal/10870792>
6. *Journal of Sleep Research*: <http://www.wiley.com/bw/journal.asp?ref=0962-1105>
7. *Handbook of Clinical Neurology*: volumes 98 and 99, pages 2–1179, 2011, are dedicated to sleep: <http://www.sciencedirect.com/science/book/9780444520074>
8. *Seminars in Neurology*: issues in 2004 (issue 4), 2005 (issue 1) and 2009 (issue 4) are dedicated to sleep medicine: <https://www.thieme-connect.de/ejournals/home.html>
9. *Chest* (dedicated sleep section in most issues): <http://www.chestjournal.org>

10. *American Journal of Respiratory and Critical Care Medicine* (dedicated sleep section in most issues):<http://intl-ajrccm.atsjournals.org>

11. *Indian Journal of Sleep Medicine*:

<http://www.indianjournals.com/ijor.aspx?target=ijor:ijsm&type=home>

Many other excellent sleep-related articles are also available in other journals from other disciplines in the medical community. This list, therefore, is not comprehensive but does serve to give the person training for board exams a good start.

## Syllabus Details

### 1) Basic Neurophysiology of Sleep

### 2) Basic Pulmonary physiology

### 3) Basics of Breathing integrated

#### **NEUROLOGY**

- i. Anatomy of Brain
- ii. Neurophysiology of Sleep
- iii. Sleep generators/controls Mechanisms
- iv. Therapeutics
- v. Sleep in various neurological diseases

#### **PULMONOLOGY (Sleep in various pulmonary diseases)**

- i. Anatomy of Breathing
- ii. Lung Physiology
- iii. Lung Pathophysiology
- iv. Ventilation
- v. Acid Base
- vi. Modification of Breathing Mechanisms by mechanical / External Source

#### **CARDIOLOGY**

- B. Basic Cardiac Cycle
- C. Effect of impairment on Breathing
- D. Sleep in Cardiac diseases

### 4) Basic Neurotechnology

- a) Mechanical Electrical Science
  1. Electrical Interface – Analog / Digital
  2. Amplifiers
  3. DC Connections
  4. Electrodes
  5. Nasal thermal pressure sensor electrodes
  6. Electrical artifact elimination



- b) Basic Electrophysiology
  - 1. Basic EEG wave form Recognition
  - 2. Basic Respiratory wave form evaluation
  - 3. Basic PSG application
  - 4. Scoring Techniques
  - 5. Scoring guidelines Old & New
  - 6. Pit falls & Problems
- c) Multiple Sleep Latency Test (MSLT) & MWT
- d) Actigraphy
- e) Treatment Modalities
  - 1. CPAP
  - 2. BIPAP
  - 3. Advanced PAP
  - 4. PAT (Peripheral arterial tonography)
  - 5. Bright management therapy

## **Clinical Sleep Medicine**

- 1. Classifications of sleep disorders
- 2. Approach to a patient with sleep disorder
- 3. Sleep disordered breathing
  - a. Epidemiology, pathophysiology, clinical presentation, diagnosis and management
  - b. Consequences of sleep disordered breathing.
  - c. Positive airway pressure therapy
  - d. Sleep disordered breathing in special situations e.g
    - i. Pediatric
    - ii. Elderly
    - iii. Pregnancy
- 4. Disordered of initiation and maintenance of sleep (insomnias)
  - Epidemiology, pathophysiology, clinical presentation, diagnosis and management
  - Pharmacological treatment of insomnia
  - Non pharmacological treatment – Sleep hygiene and cognitive behaviors therapy

5. Narcolepsy and other disorders of excessive daytime somnolence
6. Movement disorders during sleep
7. Parasomnias
8. Circadian Rhythm Disorders
9. Sleep in Psychiatric disorders
10. Sleep deprivations and its consequences
11. Drugs and sleep
12. Sleep disorders in children
13. Sleep in women
14. Sleep disorders in elderly
15. Sleep and medical jurisprudence