

# **Fellowship in Pain Management**

## **Under the aegis of**

### **West Bengal University of Health Sciences**

#### **DD 36, Sector I, Salt Lake, Kolkata 700064**

#### **Introduction:**

Pain medicine is the discipline of Medicine that specializes in the management of patients suffering from acute or chronic pain including pain in patients requiring palliative care, this management of pain both acute or chronic painful conditions require multi disciplinary approach as these complex changes involve multiple functions and systems of human body .The pain specialists (algologists / algiatrists) should be capable of assessment of pain, evaluation of the problem with special clinical and investigative and diagnostic modalities, integration of the primary problem with the multiple modalities of management and interaction with multiple disciplines of medicine. The didactic clinical and practical curriculum supervised and guided with competent faculty at the “out-patient department”, “in-patient department” and the Intervention area or “Operation Theatre”, will assure this medical education for an ethical foundation of independent skill and knowledge of the aspirant trainees.

#### **Duration of the training program:**

##### ***Fellowship in Pain Medicine***

Multidisciplinary training to develop knowledge and skill in pain medicine requires 12 months of full time residential training after successful completion of compulsory residential training accredited by the Medical Council of India for graduate medical education with an additional 2 years of experience desirable in anesthesiology, orthopedics, neurology, physical medicine and rehabilitation and psychiatry from an Institution recognized by medical council of India or government of any state or India or equivalent from other countries.

The Fellowship in Pain management by the West Bengal University of Health Sciences has been affiliated by the West Bengal Medical Council.

**Eligibility:**

- 1) Medical Graduates including compulsory residential training(MBBS in India)or its equivalent basic medical qualification of other countries (Like MD in USA) and also 2 years of additional work experience desirable in Anesthesiology, Orthopedics, Neurology, Physical Medicine, Psychiatry, Oncology from a Medical College or Hospital recognized by a University or MCI or Government of Country/State or equivalent from other countries.
- 2) Post Graduate Diploma in anesthesiology /orthopedics / Neurology / Physical Medicine /Psychiatry /Oncology-from MCI recognized University / College in India or equivalent from a Medical College or Hospital recognized by a University or MCI or Government of Country/State or equivalent from other countries.
- 3) Post Graduate degree MD /MS /DNB /DM /MCH / PhD in Anesthesiology, Orthopedics, Surgery, Neurosurgery, Neurology, Physical Medicine, Psychiatry, Oncology from MCI recognized University /College in India or equivalent.

**Course & Curriculum****Educational program:**

Ethical, Compassionate, effective and appropriate multidisciplinary modules: The trainees must develop competence of the following in 12 months

**Anatomy:**

Anatomy of nervous systems and adjacent area including Central and peripheral nervous systems. Knowledge of somatic& autonomic nervous system is essential (macroscopic and microscopic). They should have also additional knowledge of the anatomy of axial skeleton including base of skull and musculoskeletal system relevant with the chronic painful diseases.

**Physiology:**

Nerve and muscle physiology. Respiratory physiology. Physiological basis of Pain and autonomic systems including pain pathways including receptors, transmission, modulation and perception of pain, functional basis of central and peripheral nervous control systems. Work physiology, ergonomics.

**Pharmacology:**

Pharmacological basis of pain control. Drugs for management of pain, NSAIDs, Opioids. Botulinum toxins. New drug development of pain control. Analgesic drug treatment in special population. Optimization of analgesic use. Therapeutic drug monitoring & pharmacogenomics. Public health issue. Adverse event, misuse & dependence. Opioid dependence. Pharmacology of local anaesthetic including toxicity, radio contrast media and steroids. Anti-convulsant and anti-depressant. Fundamentals of epidemiology. Research methodology. Evidence based medicine including clinical trials and placebo. Animal models for evaluation of analgesic. Clinical evaluation of analgesic including measurement of pain. Ethics. Principles of clinical and research ethics.

**Bio-chemistry:**

Mechanism of action of neurotransmitters. Hormones. Genetics & pain. Molecular biology and pain.

**Anesthesiology:**

Clinical Anatomy of nerve and muscles. Intravascular access. Airway management. Basics of Ventilation. Basic and Advanced life support. Basics of sedation and general anaesthesia. Neuraxial anaesthesia.

- a) Obtaining intravenous access in a minimum of 15 patients;
- b) basic airway management, including a minimum of mask ventilation in 15 patients  
and endotracheal intubation in 15 patients;
- c) Provider course in basic life support and advanced cardiac life support;
- d) management of sedation, including direct administration of sedation to a minimum of 15 patients
- e) administration of neuraxial analgesia, including placement of a minimum of 15 thoracic or lumbar epidural injections using an interlaminar technique

**Neurology:**

Clinical approach to neurological history, examination to include mental status, cranial nerves, motor, sensory, reflex, cerebellum examinations, and gait. Faculty shall verify this experience in a minimum of five observed patient examinations. The fellow shall also become familiar with basic neuro-imaging, and identify significant findings, to include at least MR and CT of the spine and brain on a minimum of 15 CT and/or MRI studies drawn from the examples within the following areas: brain, cervical, thoracic and lumbar spine. The fellow shall have an understanding of the indicators and interpretation of electro-diagnostic studies. Headache disorders.

**Physical Medicine & Rehabilitation**

Comprehensive musculoskeletal and appropriate neuromuscular history and examination with emphasis on both structure and function as it applies to diagnosing acute and chronic pain problems and developing rehabilitation programs for them. This should include assessments of static and dynamic flexibility, strength, coordination and agility for peripheral joint, spinal, and soft tissue pain conditions. Fellows should gain an understanding of the natural history of various musculoskeletal pain disorders and be able to appropriately integrate therapeutic modalities and surgical intervention in the treatment algorithm. Physical modalities of pain management, electrophysiological interventions, exercise etc. Fellows must gain significant hands-on experience in the musculoskeletal and neuromuscular assessment of 15 patients, and demonstrate proficiency in the clinical evaluation and rehabilitation plan development of a minimum of five patients.

**Psychiatry:**

The fellow must carry out a complete psychiatric history with special attention to psychiatric and pain co morbidities, must conduct a complete mental status examination on a minimum of 15 patients, and must demonstrate this ability in five patients to a faculty observer. The program should provide educational experience in frequent psychiatric and pain co-morbidities, which include substance related, mood, anxiety, somatoform, factitious, and personality disorders. The program should also provide educational experience in the effects of pain medications on mental status. The fellow must understand the principles and techniques of the psychosocial therapies, with special attention to supportive and cognitive behavioral therapies, sufficient to explain to a patient and make a referral when indicated. Faculty must be psychiatrists or clinical psychologists who have documented experience in the evaluation and treatment of patients with chronic pain. Psychosocial aspects of pain, including cultural and cross- cultural considerations.

**Orthopedics;**

The fellow must have knowledge of complete evaluation of specific orthopedic diseases related with chronic pain. They should understand basic physiology and pathology of bone formation and break down. Role of Vitamins, minerals in osteogenesis, pathophysiology and management of osteoporosis, bone tumors, structural problems like kyphosis and management. They should record complete orthopedic history and clinical examination for a minimum of 15 patients, and must be able to demonstrate his/ her ability in 5 patients to a faculty observer. The trainee must understand the principles and techniques of different medical and surgical techniques related with orthopedic diseases with pain as co-morbidity. They should have clinical experience of 5 patients of surgical operation on orthopedic diseases.

**Community Medicine**

The fellow must have knowledge of Community Medical disorders in relation with acute and chronic painful diseases. He/she should have clinical knowledge of occupational health hazards in related diseases. Should have knowledge of epidemiology of pain in community and its prevention. Age, gender, socioeconomic and culture issues in pain.

**Surgery:**

The fellow must have knowledge of surgical diseases related with acute or chronic pain including post surgical pain. Surgical management of painful disorders including intra abdominal surgeries, surgeries on spine, surgical sympathectomy, neurovascular decompression of trigeminal nerve and other relevant discussions. They should be able to demonstrate common clinical examination. They should record complete clinical experience of 5 surgical cases including interventions.

**Gynecology:**

Gynecological diseases with acute or chronic pelvic and perineal pain. They should have clinical experience of at least 5 such cases including management of labor pain.

**Oncology and Palliative care:**

The fellow must have knowledge of malignant diseases with pain including cancer pain syndromes and record of clinical experience of at least 30 cases of oncology with pain, regarding their management

with chemotherapy, radiotherapy, surgery, interventional pain management and palliative care. Care and approach during end of life. Social, psychological and spiritual aspects of pain management.

**Radiology:**

Basics of Radiology: x-ray, USG, CT, MRI and other types of imaging. Radiation and safety. Interpretation of diseases related with common painful conditions like prolapsed intervertebral disc, facet joint diseases, spondylolisthesis, vertebral diseases, malignancy, tuberculosis etc.

**Statistics:**

Basics of Statistics for record keeping and Research and methodology in Pain.

**Yoga and Indian Systems of Therapy in Pain:**

Basic theory and techniques in Yoga, Meditation, Pranayam and empathy related with Pain and Palliative therapy for painful conditions through didactic theory and practical classes.

**Experiences of patient care:****Outpatient (Continuity Clinic) Pain Experience**

Continuity experience will provide the fellow with supervised experience in the ongoing management of a diverse population of patients with chronic pain, including cancer pain. The experience must allow interaction with other specialists in a multidisciplinary model of chronic pain management. To this end, the pain medicine fellow must attend a supervised outpatient clinic, approximately weekly, throughout the year of the program. Fellows may be absent from continuity clinic experience only if the rotation site is more than one hour from the core institution. The maximum allowable time away may be no more than four months. This will provide a minimum of eight months experience (full-time equivalent of at least 60 half-days or 200 hours equivalent). Primary responsibility for 50 different patients followed over at least two months each must be documented.

**Inpatient Chronic Pain Experience**

Inpatient chronic pain experience must be supervised on a pain team responsible for the assessment and management of in patients with chronic pain including cancer pain. Patients may be seen through either a consultation team or while on a designated inpatient pain medicine service. To establish this experience, the fellow must document involvement with a minimum of 15 new patients assessed in this setting. They must attend the inpatient department with round the clock program. One must have at least 3 half days every week for 8 months or 280 hours of inpatient department involvement.

**Acute Pain Inpatient Experience**

Acute pain inpatient experience must be supervised in the assessment and management of in patients with acute pain. To establish this experience, the fellow must document involvement with a minimum of 50 new patients.

## **Interventional Experience**

Interventional experience for development of skill must be supervised, and the objectives including understanding the selection criteria for a broad range of interventions, understanding the risks and potential advantages of these interventions, and obtaining exposure to the technical components involved in these interventions. It may be integrated with continuity experience or inpatient experience. To establish this skill based experience, the fellow must document involvement with a minimum of 25 patients who undergo interventional procedures. One must have 4 full days (4-6 hours each day) involvement every month for 8 months or minimum 120 hours of interventional involvement.

Some programs will have faculty with extensive expertise in interventional pain medicine, and such programs are encouraged to provide an expanded didactic and clinical experience in interventional pain medicine. Those programs offering advanced education in interventional pain medicine shall be required to demonstrate that they provide substantial supervised clinical experience in addition to that required within the core curriculum. Education in Interventional Pain Medicine shall be required to demonstrate that fellow selecting an advanced interventional track are exposed to a didactic curriculum that includes topics in Interventional Pain Treatment and that fellows receive direct, hands-on experience with a range of interventional pain treatment techniques. At the conclusion of the training period, the program director must prepare a final report for each fellow that clearly documents the specific interventional techniques with which fellows demonstrate competence. The following minimal experiences for interventional techniques are offered as guidelines:

- 1) Image-guided Head and face procedures (10procedures)
- 2) Image-guided spinal intervention techniques cervical region (10procedures)
- 3) Image-guided spinal intervention techniques thoracic area (10procedures)
- 4) Image-guided spinal intervention techniques lumbar area (40procedures)
- 5) Image guided intervention at Pelvic area (10procedures)
- 6) Injection of major joint or bursa procedures (20procedures)
- 7) Trigger point injection, cervical, thoracic, lumbar (20procedures)
- 8) Sympathetic blockade (10procedures)
- 9) Neurolytic, techniques including chemical and radiofrequency treatment for pain (10procedures each)
- 10) Intradiscal procedures, including discography (10procedures)
- 11) Vertebroplasty, Balloon Kyphoplasty (desirable)
- 12) Nucleoplasty (desirable)
- 13) Spinal cord stimulation (desirable)
- 14) Spinal drug delivery system implantation (desirable)



**Cancer Pain:**

Cancer pain experience must be a supervised, longitudinal experience in an ambulatory or inpatient population who requires care for cancer pain, and may be integrated with continuity or inpatient experiences. The objectives should include the understanding of a clinical approach to the treatments that comprise multidisciplinary cancer pain care, and the understanding of strategies to integrate pain management into the treatment model. The fellow must document longitudinal involvement with a minimum of 20 patients.

**Palliative Care Experience:**

Palliative care must be a supervised longitudinal experience in an ambulatory or inpatient population that requires palliative care. The experience will include understanding a clinical approach to the multi-dimensional treatments that comprise palliative care, and an understanding of strategies to integrate pain management into this multidimensional treatment model. It may be integrated with continuity experience or inpatient experience. To establish this experience, the fellow must document longitudinal involvement with a minimum of 30 patients who require palliative care.

**Pediatric Experience**

Experience with the assessment and treatment of pain in children is strongly encouraged.

**Medical Knowledge**

Fellows must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to patient care. Fellows must be exposed to the following areas through a formal structured didactic program:

**Part I. General (26 hours)**

1. Anatomy and Physiology (6 hours)
2. Pharmacology of Pain Transmission and Modulation (2 hours)
3. The Development of Pain Systems (2 hours)
4. Designing, Reporting, and Interpreting Clinical Research Studies about Treatments for Pain: Evidence-Based Medicine (4 hours)

5. Animal Models of Pain and Ethics of Animal Experimentation (2 hours)
6. Ethical Standards in Pain Management and Research (2 hours)
7. Basics of Statistics for Pain research and record keeping (8 Hours)

**Part II. Assessment and Psychology of Pain (16hours)**

1. Pain Measurement in Humans (1hour)
2. Placebo and Pain (1hour)
3. Clinical Nerve Function Studies (2 Hours)
- 4) Imaging (4 hours)
5. Epidemiology (4 hours)
6. Psychosocial and Cultural Aspects of Pain (2 hours)
7. Sex and Gender Issues in Pain (2 hours)

**Part III. Treatment of Pain (80 hours) A. Pharmacology (8 hours)**

**A. Pharmacology (8 hours)**

1. Opioids
2. Antipyretic Analgesics: Nonsteroidals, Acetaminophen, and Phenazone Derivatives
3. Antidepressants and Anticonvulsants
4. Miscellaneous Agents

**B. Other Methods (76)**

1. Psychological Treatments (Cognitive-Behavioral and Behavioral Interventions) (4hours)
2. Yoga and Indian traditional systems (10 hours)
3. Stimulation-Produced Analgesia (2 hours)
4. Interventional Pain Management Including Nerve Blocks and Lesioning (46hours)
  - (a) Airway management skills (2 hours)
  - (b) Sedation/analgesia (2 hours)
  - (c) Fluoroscopic imaging and radiation safety (2 hours)
  - (d) Pharmacology of local anesthetics and other injectable medications, including radiographic contrast agents and steroid preparations. This must include treatment of local anesthetic systemic toxicity (4 hours)
  - (e) Trigger point injections (1 hour)
  
  - (f) Peripheral and cranial nerve blocks and ablation (3 hours) (g) Epidural and intrathecal medication management (2 hours) (h) Spinal cord stimulation (2 hours)
  - (i) Intrathecal drug administration systems (2 hours)
  
  - (j) Neural Interventions (Somatic, Sympathetic, Neuro-axial) (10hours)

**Head and neck (2 hours)**

**Thorax (2 hours)**

**Lumbar region (2hours)**

**Pelvis (2hours)**

**Extremities (2hours)**

**(k) Newer advancements in Interventional Pain: (10 hours)**

Intervertebral disc interventions, vertebroplasty and kyphoplasty, retrograde pelvic stimulation, Cooled RF, Deep brain stimulation, Dorsal root ganglion interventions, Transforaminal endoscopic disc procedures, cordotomy.

(I) BLS, ACLS (6 hours)

5. Surgical Pain Management (2 hours)
6. Physical Medicine and Rehabilitation (4 hours)
7. Work Rehabilitation, Ergonomics (4 hours)
8. Complementary Therapies (4 hours)

**Part IV. Clinical States (46 hours)**

**A. Taxonomy (2)**

1. Taxonomy of Pain Syndromes (2 hours)

**B. Tissue Pain (16)**

1. Acute and Postoperative Pain (2 hours)
2. Cancer Pain (2 hours)
3. Cervical Reticular Pain (2 hours)
4. Neck Pain (2 hours)
5. Lumbar Reticular Pain (2 hours)
6. Sports related pain (2 hours)
7. Pain and occupation (2 hours)
8. Low Back Pain (2 hours)
9. Musculoskeletal Pain (2 hours)
10. Muscle and Myofascial Pain (2 hours)

**C. Visceral Pain (8)**

1. Visceral Pain (2 hours)
2. Chronic Urogenital Pain (4 hours)
3. Pain in Pregnancy and Labor (2 hours)

**D. Headache and Facial Pain (6)**

1. Headache (4 hours)
2. Orofacial Pain (2 hours)

**E. Nerve Damage (4)**

3. Neuropathic Pain (2 hours)
4. Complex Regional Pain Syndromes (2 hours)

**F. Special Cases (10)**

5. Pain in Infants, Children, and Adolescents (2 hours)
6. Pain in Older Adults (2 hours)
7. Pain Issues in Individuals with Limited Ability to Communicate Due to Cognitive Impairment (2 hours)
8. Pain Relief in Substance Abusers (2 hours)
9. Pain Relief in Areas of Deprivation and Conflict (2 hours)

### **Fellows' Scholarly Activities**

The curriculum must advance fellows' knowledge of the basic principles of research, including how research is conducted, evaluated, explained to patients, and applied to patient care. Fellows should participate in scholarly activity.

The evaluations of fellow performance (must be accessible for review by the fellow, in accordance with institutional policy). These should include evaluations of attitude, interpersonal relationship skills, fund of knowledge, manual skills, decision-making skills, and critical analysis of clinical situations. Trainees in pain medicine must obtain over all satisfactory evaluations at completion of 12 months of the fellowship to receive credit for the program. Periodic evaluation of patient care (quality assurance) is mandatory. Fellows in pain medicine should be involved in continuous quality improvement, utilization review, and risk management.

## Course structure

The course is divided the three components

1. Learning theoretical concepts (Theoretical)
2. Learning applications of theoretical concepts (Practical)
3. Internship / Learning through organizational attachment (Practical)  
(2, 3 will include involvement at the (OPD, Laboratory, Indoor and Operation Theatre)

### Training

There will be 3 parts (Theoretical, Practical and supervised Training). Approximately 800 teaching hours a year. There will be additional 200 hours of additional time allotted for Library, seminar, personal studies, leisure times etc. in each semester. Theoretical classes will be 176 hours and practical training will be for 600 hours (total 776 hours)

### Fellow Duty Hours

Maximum Duty hours must be limited to 48 hours per week, inclusive of all in- house call activities.

### Mandatory Time Free of Duty

Fellows must be scheduled for a minimum of one day free of duty every week (when averaged over four weeks). At-home call cannot be assigned on these free days.

### Infrastructure necessary for the Institution for running the course:

**Space:** Seminar hall, Library, Faculty room, Operation theatre, store room, nurses room, in the sterile zone; recovery area with facilities as per norms. There should be a patient's examination room and waiting area; other necessary infrastructure for running the course under West Bengal University of Health Sciences should be followed.

### **Patient Management:**

#### **A) Out Patient Department:**

At least once a week and preferably two (with adequate no of patients attending, minimum average of 100 patients in a week). Records of OPD visit to be kept in the custody.

**B) In Patient Department:**

At least 20 patients in the department in a multidisciplinary Hospital. Patients who are unable to attend outpatient department for severe disabling pain either due to benign (e.g., intervertebral prolapsed disc, herpetic neuralgia etc) or cancer patients with severe pain and disability, should be treated in the in Patient department under the discipline.

**C) Operation Theatre / procedure room** – dedicated operation theatre for a whole day at least for twice a week (Minimum of 10 interventions for chronic pain management per week) in a sterile zone. The operating personnel should follow the standard protocols to manage the patients in a sterile, safe and ethical manner during or after the interventional procedures.

**Equipments:**

**Procedure table:**

Fluoroscope compatible procedure table

**Fluoroscope:**

The operation theatre personnel should be trained with radiation safety. There should be fluoroscope operator who should be a trained technician

**Radiation shields:**

Lead gowns, Thyroid shield, Radiation eye glasses should be available in adequate numbers.

**Operating light:**

Illumination should be as per norms.

**Resuscitation facilities:**

Intubation kit, ECG monitoring, multi parameter monitor (heart rate, NIBP, SPO2), Suction apparatus.

**Radiofrequency Generator:**

With standard accessories (Canula, Needles probes, grounding cable and pad etc)

**Needles** (Epidural needle and assembly set, Spinal needle (22G, 10cm and 15cm) - at least 10 each in the store.

**Catheters**(Epidural or intrathecal catheters)

**Nerve stimulator** (cum mapper)

**Epidural or intrathecal drug delivery systems** (desirable, in stock)

**Intradiscal minimally invasive pain Procedural arrangements like Ozone generator / Spine Nucleoplasty system/ percutaneous disc decompressor** (any)

**Spinal cord/ Peripheral nerve stimulation device.** (Desirable in stock)

**Vertebroplasty / Kyphoplasty systems** (Desirable in Stock)



**Faculty:** Multi-disciplinary Faculties from the Departments of Anesthesiology, Orthopedics, Physical medicine, Psychiatry, Oncology, Physiology, Anatomy, Pharmacology Neurology, Statistics, Ergonomics, Biomechanics, AYUSH / Indian Traditional systems in Pain (Yoga, Meditation etc.) apart from the faculty members competent in interventional pain procedures (Algologist) should be available. There should be adequate no of faculties - Fulltime / Part time (Both Salaried and non-salaried on honorarium basis). There should be at least one faculty not below the rank of Associate Professor and another 3 faculties not below the rank of Assistant professor. A Visiting Guest Faculty or Emeritus Professor in the allied discipline also acceptable. There should be adequate numbers of In house full time faculties to conduct practical sessions in the inpatient department at least in the allied subjects.

**Curriculum materials:**

Text Books: 1) Raj's Practical Management of Pain, Mosby 2) Interventional Pain Management

–Image Guided procedures, Saunders 3) Manual of RF Techniques - Dr Charles A Gauci, Co Medical, 4) Bonica's Management of Pain, Fishman 5) Goodman & Gillman's pharmacology 6) Brown: Atlas of Regional Anesthesia and other Standard Text Books in the allied Disciplines. Journalism Pain (Indexed or Peer reviewed, National / International) should be accessible to the Trainees.

**Financial Issues:**

**Course Fees:**

1) 1Year Fellowship in Pain Medicine: Maximum of Rupees 15,000/- only from Indian Citizen might be deposited at the Institute affiliated by the WBUHS. Those who will be offered stipend/ honorarium should also deposit development fees of additional 15,000/- only for the Institute.

**Honorarium of the Faculties: Both full time and part time guest faculties)**

**As per standard laws and regulations.**

**Accommodation:** Accommodation for the fellows: Desirable. Semi furnished accommodation might be given in or very near to the Hospital premises, - for those, who have the responsibilities of management of inpatient department under a supervisor or faculty who will be on call. Facilities for round the clock paid kitchen / canteen services should be available for the residents in the campus.

**Course commencement:**

Yearly course will start with the instruction of the WBUHS accordingly.

**Selection of Trainees:**

West Bengal University of Health Sciences will send the list of the selected trainees to the approved Institution after assessment of the eligibility of the applicants and admission test / interview.

**Certification:**

After successful completion of the course with at least 75% attendance of the trainee (a report of the course co-coordinator to be sent to the WBUHS accordingly) there will be evaluation of the trainees with examination, conducted by WBUHS, Certificates will be issued by the West Bengal University of Health Sciences for the successful candidates accordingly.

**Examination:**

Examination will be completed within 3<sup>rd</sup> week of September, subjected to confirmation by the WBUHS

**Minimum 75% attendance of the Theory and Practical classes held at the Institute.**

Theory: 200 marks, 2 papers:

Paper I (100 marks): (20 marks reserved for the Internal assessment);

Basic theoretical knowledge on multidisciplinary pain medicine. (Anatomy , physiology, Biochemistry, pharmacology, statistics 7 Research methodology, Neurology, physical medicine and rehabilitation, Anaesthesiology, psychiatry and psychology, orthopedics, community medicine, surgery, gynaecology, oncology and palliative care, hematology, radiology, biomechanics)

**Paper II: (100 marks): (20 marks reserved for the internal assessment);**

Acute and chronic pain management, Interventional pain procedures, airway management, basic and advanced life support)

**Practical: 200 marks : (40 marks reserved for internal assessment)**

Log book : 20

Dissertation: 20

Long Case (Bed side): 30 for 1 case

Short Case (Bed side): 30 for 2 cases

Instruments/ specimen: 30 for 5 items

Chart & Scales, Plates : 30 for 2 items

Internal Assessment: 40 (Internal examination at the institute 20, Faculties assessment round the year for fellows attitude, ethical standard and behavior towards patients 10, Seminar- 10)

Theory examination will be conducted at the University while practical will be held at the Institute.

Candidate has to pass separately in 1) Theory , 2) Practical and 3) Internal assessment with 50% of marks each.

Unsuccessful candidate for the first time will get two more chances successively, one after 6 months and last one after 1 year with the next batch.

