

Proposal

Paediatric Orthopaedic Fellowship Programme

King George's Medical University UP, Lucknow

Prepared by

PAEDIATRIC ORTHOPAEDICS UNIT  
Department of Orthopaedics  
King George's Medical University UP, Lucknow

  
( Prof. Anil Singh )

## Broad Objectives of Programme

The objective of this Fellowship program is to train young orthopaedic surgeons to deal with paediatric orthopaedic problems effectively:

### SPECIFIC OBJECTIVES

The specific objectives of this training programme would be to

1. Make the trainee competent to diagnose a wide range of paediatric orthopaedic conditions that are encountered in India.
2. To make the trainee competent to arrive at the diagnosis in a cost-effective manner with a judicious use of investigative modalities.
3. To make the trainee conversant with available options for treatment and to choose the most appropriate option which is applicable to conditions prevailing in India.
4. To sensitize the trainee for the need for improvement of health-care delivery in the field of pediatric orthopaedics in India with reference to preventive, diagnostic, curative and rehabilitative services.

## 2. CURRENT STATUS IN INDIA: NEED & RELEVANCE

India has the largest number of children. A large proportion of patients who attend Orthopaedic departments in India are children. The current management of several orthopaedic conditions in children in India is far from satisfactory. To cite a few examples;

- i. Majority of cases of congenital dislocation of the hip are diagnosed only after the children have begun to walk.
- ii. A sizeable proportion of neonatal osteomyelitis and pyogenic arthritis are diagnosed only after irreparable damage to the skeleton has occurred.
- iii. Compartmental syndromes and consequent Volkmann's ischaemic contracture occur with unacceptable frequency.
- iv. Often no attempt is made to diagnose the exact nature of major congenital limb anomalies (eg. Proximal focal femoral deficiency, tibial hemimelia) and often no attempt is made to treat them. Hence there is a need to improve the quality of care of paediatric orthopaedic conditions in India.

These can only be achieved if more surgeons are trained in this field.

## 3. EXISTING SCENARIO

Several orthopaedic surgeons currently trained in India feel poorly equipped to deal with orthopaedic problems in children. This is largely because most centers give far more emphasis to

traumatology and inadequate attention is paid to training residents to deal with paediatric orthopaedic problems.

The branch of Paediatric Orthopaedics is well established in USA, UK, Europe, Australia and Japan with specialised departments, national and international societies and specialised journals devoted exclusively to paediatric orthopaedics. These have been in existence for over 30 years. Specialised training in the field of Paediatric Orthopaedics is currently being offered in all these countries. At present there are only three centers (the Paediatric Orthopaedic Service of the Department of Orthopaedics, Kasturba Medical College, Manipal and Dr Johari's hospital in Mumbai and department of Pediatric Orthopaedics in Vellore) where training in the field of Paediatric orthopaedics is offered. A FNB Course started in Manipal is no longer active at present).

*It is important for the King George's Medical University, Lucknow to take a lead role in forwarding the cause of training in Paediatric Orthopaedics by developing standards and guidelines for Paediatric Orthopaedic fellowships in the country.*

### 3.1 EXISTING INSTITUTIONAL SCENARIO

An independent exclusive Paediatric Orthopaedic Unit is working in the Department of Orthopaedics of our university since 2008. Specialized Paediatric Orthopaedic OPD is being conducted regularly since then. Today, this unit is not only getting intra-institutional references for specialized consultations but also receiving children with various orthopaedic disease from whole of UP as well as from Nepal, Uttrakhand and Bihar.

### 4. FUTURE DEVELOPMENTS

It is likely that in due course, more centers in India will be in a position to train young orthopaedic surgeons. Meanwhile, University will adopt necessary actions so that this course may be recognized by MCI as Mch (Paediatric Orthopaedic Surgery).



## REQUIREMENTS FOR THE FELLOWSHIP PROGRAM

### (i) FACULTY:-

#### CORE FACULTY

A Paediatric Orthopaedic Surgeon with adequate qualifications, training, experience, and commitment to teaching and research will co-ordinate the course.

#### Qualifications:

The coordinator should have:

a) Basic qualification in Orthopaedics (M.S of a recognised University /MCh. Orthopaedics)

b) Experience: -

At least 08 years' experience as a surgeon in the field of Paediatric Orthopaedics.

c) Practice:

The coordinator of the programme must be a full-time staff of the University. His / her professional time should be majorly devoted to the practice of Paediatric Orthopaedics.

d) Research and Publications:

The coordinator should have commitment to research in the field of Paediatric Orthopaedics. At least 10 scientific articles should have been published from the Unit / Department in the field of Paediatric Orthopaedics in peer -reviewed, indexed journals. Of these, at least three must have been published in the preceding three years.

e) Membership of the Paediatric Orthopaedic Society:

The Co-ordinator must be an active member of the Paediatric Orthopaedic Society of India and Indian Orthopaedic Association.

Under the guidance of Head, Department of Orthopaedics, second line faculty showing interest in the field of Paediatric Orthopaedics will also be incorporated in teaching and training of the candidates. From time to time, faculty of eminence in the field may also be invited for the teaching and training purpose.

(ii) INFRASTRUCTURAL FACILITIES: Within existing infrastructure, program can be started – NO ADDITIONAL Facility required

a) Bed strength: The minimum bed strength of the paediatric orthopaedic unit (general ward only) should be at least 20 beds.

b) Equipments: Apart from a fully equipped orthopaedic operation theatre it is desirable that the following equipments are available in the centre:

- \* Image intensifier, Orthopaedic table, spica table suitable for children, tourniquets
- \* Limb lengthening equipment – ring fixator and monolateral
  - \* AO equipment for mini, small and large fragment surgery, osteotomes set, bone cutters, wiring equipment, spine instruments, condylar plate sets, arthroscopy equipment, Implants required for Orthopaedic surgery in children
- \* Powered drill and drivers, burrs, saws
- \* Flexible nails, rush rods
- \* Specialised orthopaedic table

c) List of important teaching equipments

Digital camera, Teaching Board, LCD Projector, computer, access to internet and online journals

d) Paramedical and nursing support

e) Services of Department of Physical Medicine and Rehabilitation – for physiotherapy and occupational therapy.

f) Facilities of well-equipped departments of Radiodiagnosis (with: MRI, spiral CT & Ultrasound facilities);

g) Facilities of Pathology, Microbiology and Biochemistry departments are mandatory.

h) Library

A library with a collection of books and journals related to both general orthopaedics and books devoted exclusively to paediatric orthopaedics is essential.

The library must subscribe to the following journals:

The Journal of Bone & Joint Surgery (British)

The Journal of Bone & Joint Surgery (American)

Journal of Paediatric Orthopaedics

Journal of Paediatric Orthopaedics -B.

Online journals

### THE SELECTION PROCEDURE

The selection procedure would be as approved by our institution but preferably should enroll candidates who have basic qualification of MS (Orthopaedic) degree / DNB (Orthopaedics) with 01 year post degree work experience. The selection could be held after widely advertising for the course and fulfilling institutional norms for such admissions

### THE NUMBER OF TRAINEES

It will be emphasized that for any admission year only 02 Fellows should be admitted.



## THE TRAINING PROGRAMME

### 1. DURATION OF THE COURSE

\* The duration of the course would be 12 calendar months (52 weeks).

### 2. ROTATION OF POSTING

The candidate would be posted in the Paediatric Orthopaedic Service Department for 34 weeks.

The peripheral related postings (16 weeks) for the fellow will be in the related departments such as

- Physical medicine and rehabilitation including gait lab and artificial limbs for 02 weeks,
- Department of Paediatrics: ICU 01 wk, oncology unit 01 wk, general paediatric department 02 wks
- Spinal Injury unit (with emphasis on Paediatric Spinal Injuries) 02 week
- Paediatric surgery 01 wks.
- Radiology department (emphasis on x-rays, ultrasound and CT /MRI OF Paediatric patients 02 wks
- Rheumatology Department (with emphasis on paediatric patients) 02 wks
- Plastic surgery department 01 wk
- Department of Advanced Research 01 wk
- Department of Neurology (with emphasis on paediatric patients) 01 wk

Under the guidance of Head, Department of Orthopaedics, KGMU, The coordinator and officiating Head of the Paediatric Orthopaedic Service unit department will co-ordinate with the associated faculty members and enable the candidate to witness the treatment of cases of paediatric -subspecialty problems if they require treatment under another orthopaedic subspecialty such as paediatric spine or hand.

02 weeks for evaluation / assessment and examinations.

### 3. CURRICULUM TO BE COVERED

Being a higher specialty training course, the emphasis will be on self learning with seminars and journal clubs organized to cover the spectrum of disorders in Paediatric Orthopaedics.

The specific areas of training would be divided into the following 12 modules, each to be covered in equal period intervals.

- Evaluation of the paediatric orthopaedic patient.
- Normal and abnormal development of the musculoskeletal system
- Congenital & developmental anomalies of the upper limb



- Congenital & developmental anomalies of the hip
- Congenital & developmental anomalies of the knee and leg
- Congenital & developmental anomalies of the foot
- Congenital & developmental anomalies of the spine
- Paralytic problems including poliomyelitis, spina bifida, multiple congenital contractures,
- Obstetric palsy, muscular dystrophy
- Cerebral palsy
- Abnormalities of epiphyses
- Limb length inequality
- Metabolic bone disease
- Bone tumours
- Infections of bone and joints
- Fractures and joint injuries of the upper limb!
- Fractures and joint injuries of the lower limb & spine
- Complications in paediatric orthopaedics.
- Controversies in paediatric orthopaedics
- Newer developments in paediatric orthopaedics and Paediatric orthopaedic challenges in the developing world

#### 4: PRACTICAL SKILLS TO BE GAINED

##### 4.1 CLINICAL SKILLS

It is envisaged that at the end of the period of training the candidate would have acquired the following clinical skills:

1. To diagnose, evaluate and effectively plan treatment for the following conditions:
2. Common angular and torsional deformities of the limbs
3. Acute osteomyelitis
4. Septic arthritis
5. Congenital clubfoot
6. Developmental dysplasia of the hip in the neonate and infant
7. Perthes' disease
8. Congenital pseudarthrosis of the tibia
9. Osteogenesis imperfecta
10. Limb length inequality
11. To undertake a comprehensive evaluation of children with: .
12. Cerebral palsy
13. Spina bifida
14. To effectively perform the following diagnostic and therapeutic procedures:
15. Arthrography of the hip
16. Myo-neural blocks for spasticity in cerebral palsy

To effectively treat by non-operative means the following conditions in the manner stated:



- a) Manipulation of clubfoot and application of clubfoot casts
- b) Wedging of plaster casts for correction of individual deformities in clubfoot
- c) Closed reduction and plaster spica application for developmental dysplasia of the hip
- d) Tone inhibitions casts for spasticity in cerebral palsy
- e) Closed reduction of forearm, elbow, leg and ankle fractures

To be conversant with the prescribing and checking the fitting of the following:

- I. Denis-Browne splint for clubfoot
- II. Pavlik harness for DDH
- III. Orthoses for the lower limb for polio
- IV. Orthoses for spina bifida
- V. Orthoses for cerebral palsy

To become conversant with a logical approach to the diagnosis of the following conditions:

- a. Skeletal dysplasias
- b. Rhizomelic, mesomelic and acro-mesomelic dysplasias
- c. Rickets of renal tubular origin
- d. Proximal tubular, distal tubular disorders

It would be ensured that the candidate receives "hands on" experience in surgery during the period of training in a supervised graduated manner.

The candidate would maintain a log book of procedures witnessed, assisted and performed both under supervision and independently.

At the end of the period of training the candidate should be competent to perform the following operations independently:

- 1. Arthrotomy and drainage of septic arthritis of any joint of the upper or lower limb
- 2. Posteromedial soft tissue release for clubfoot
- 3. Mid-tarsal osteotomy / tarsal curettage / talectomy
- 4. Tendon transfer eg. SPLATT / Tib.posterior transfer
- 5. Tendon lengthening procedures around the ankle, knee and hip for cerebral palsy
- 6. Proximal femoral osteotomy for Perthes' disease or for DDH
- 7. Corrective osteotomies of the tibia or femur to correct angular deformities
- 8. Pinning of slipped upper femoral epiphysis
- 9. Open reduction of developmental dysplasia of the hip
- 10. Managing all trauma of the upper and lower limb in a child
- 11. Managing a child with osteogenesis imperfecta





12. Manage benign lesions of the bone and soft tissues, understand principles of biopsy for malignant tumors and be able to do wide excision of minor tumors

#### 5. RESEARCH SKILLS TO BE GAINED

The candidate would be actively involved in the on-going research activities of the Unit. The candidate would be expected to complete at least one project during the year and prepare 02 papers on the work for publication in a peer-reviewed journal.

The candidate would also be expected to present two papers at the annual conference of the Paediatric Orthopaedic Society of India and Indian Orthopaedic Association.

It is hoped that the candidate would gain some insight into the methodology of clinical research including the design and planning, analysis of data, simple statistical methods and finally the nuances of logical presentation of the data in a scientific communication.

#### 6. AFFECTIVE SKILLS

- i. How to communicate with patients and their attendants
- ii. How to explain prognosis of the disease
- iii. How to explain the procedure
- iv. How to take informed consent
- v. How to break the bad news?

#### 7. ATTITUDE INSTRUMENTS

- i. Portfolios
- ii. Structured Essay type questions
- iii. OSCEs
- iv. Checklists
- v. Rating Scales
- vi. Patient management problems

### EVALUATION

#### 1. INTERNAL EVALUATION (FORMATIVE ASSESSMENT)

Periodic internal assessment would be carried out to assess the progress of the candidate during the training. The format of the assessment is appended. It is emphasized that the assessment is not only on acquisition of theoretical knowledge but an overall assessment of the candidate's performance as a surgeon.

| CURRICULUM  | TOOLS OF LEARNING | TOOLS OF ASSESSMENT |
|---|-------------------|---------------------|
| • Evaluation of the paediatric orthopaedic patient. | Lecture,          | MCQ                 |

|   |                             |                     |
|---|-----------------------------|---------------------|
|   | Demonstration,<br>Video     | OSCE                |
| • Normal and abnormal development of the musculoskeletal system                               | Lecture<br>Seminar          | MCQ                 |
| • Congenital & developmental anomalies of the upper limb                                      | Lecture<br>Seminar          | MCQ                 |
| • Congenital & developmental anomalies of the hip   | Lecture<br>Seminar          | MCQ                 |
| • Congenital & developmental anomalies of the knee and leg                                    | Lecture<br>Seminar          | MCQ                 |
| • Congenital & developmental anomalies of the foot  | Lecture<br>Seminar          | MCQ                 |
| • Congenital & developmental anomalies of the spine   | Lecture<br>Seminar          | MCQ                 |
| • Paralytic problems including poliomyelitis, spina bifida, multiple congenital contractures, | Lecture<br>Seminar          | MCQ<br>MCQ          |
| • Obstetric palsy, muscular dystrophy   | Lecture<br>Seminar          | MCQ                 |
| • Cerebral palsy  | Lecture<br>Seminar<br>Video | MCQ                 |
| • Abnormalities of epiphyses  | Lecture<br>Seminar          | MCQ                 |
| • Limb length inequality  | Lecture<br>Seminar          | MCQ                 |
| • Metabolic bone disease  | Lecture<br>Seminar          | OSCE<br>MCQ         |
| • Bone tumours  | Lecture<br>Seminar          | MCQ                 |
| • Infections of bone and joints   | Lecture<br>Seminar          | OSCE<br>MCQ         |
| • Fractures and joint injuries of the upper limb!   | Lecture<br>Seminar          | OSCE<br>MCQ         |
| • Fractures and joint injuries of the lower limb & spine                                      | Lecture<br>Seminar          | OSCE<br>MCQ<br>OSCE |

|   |                    |     |
|---|--------------------|-----|
| <ul style="list-style-type: none"> <li>• Complications in paediatric orthopaedics.</li> </ul>   | Lecture<br>Seminar | MCQ |
| <ul style="list-style-type: none"> <li>• Controversies in paediatric orthopaedics</li> </ul>  | Lecture<br>Seminar | MCQ |
| <ul style="list-style-type: none"> <li>• Newer developments in paediatric orthopaedics and Paediatric orthopaedic challenges in the developing world</li> </ul> | Lecture<br>Seminar | MCQ |

### CLINICAL SKILLS

| CLINICAL SKILLS  | TOOLS OF LEARNING                 | TOOLS OF ASSESSMENT            |
|--|-----------------------------------|--------------------------------|
| To diagnose, evaluate and effectively plan treatment for the following conditions:                               |                                   |                                |
| <ul style="list-style-type: none"> <li>▪ Common angular and torsional deformities of the limbs</li> </ul>        | Seminar<br>Demonstration<br>Video | Objective tests, OSCE          |
| <ul style="list-style-type: none"> <li>▪ Acute osteomyelitis</li> </ul>  | Seminar<br>Demonstration<br>Video | Constructed response questions |
| <ul style="list-style-type: none"> <li>▪ Septic arthritis</li> </ul>   | Seminar<br>Demonstration<br>Video | Constructed response questions |
| <ul style="list-style-type: none"> <li>▪ Congenital clubfoot</li> </ul>  | Seminar<br>Demonstration<br>Video | Objective tests, OSCE          |
| <ul style="list-style-type: none"> <li>▪ Developmental dysplasia of the hip in the neonate and infant</li> </ul> | Seminar<br>Demonstration<br>Video | Objective tests, OSCE          |
| <ul style="list-style-type: none"> <li>▪ Perthes' disease</li> </ul>   | Seminar<br>Demonstration<br>Video | Objective tests, OSCE          |
| <ul style="list-style-type: none"> <li>▪ Congenital pseudarthrosis of the tibia</li> </ul>                       | Seminar<br>Demonstration<br>Video | Constructed response questions |
| <ul style="list-style-type: none"> <li>▪ Osteogenesis imperfecta</li> </ul>                                      | Seminar<br>Video                  | Constructed response           |

*Handwritten signature*

|   |                                   |   |
|---|-----------------------------------|---|
| <ul style="list-style-type: none"> <li>▪ Limb length inequality</li> </ul>  | Seminar<br>Demonstration<br>Video | questions<br><br>Objective tests,<br>OSCE<br>Constructed<br>response<br>questions |
| <p>To undertake a comprehensive evaluation of children with:</p> <ul style="list-style-type: none"> <li>▪ Cerebral palsy</li> </ul>                 | Seminar<br>Demonstration<br>Video | Objective tests,<br>OSCE  |
| <ul style="list-style-type: none"> <li>▪ Spina bifida</li> </ul> <p>To effectively perform the following diagnostic and therapeutic procedures:</p> | Seminar<br>Video                  | Objective tests,<br>OSCE  |
| <ul style="list-style-type: none"> <li>▪ Arthrography of the hip</li> </ul>   | Seminar<br>Demonstration<br>Video | Objective tests,<br>OSCE<br>Checklist   |
| <ul style="list-style-type: none"> <li>▪ Myo-neural blocks for spasticity in cerebral palsy</li> </ul>  | Seminar<br>Demonstration<br>Video | Objective tests,<br>OSCE<br>Checklist   |
| <ul style="list-style-type: none"> <li>▪ Manipulation of clubfoot and application of clubfoot casts</li> </ul>                                      | Seminar<br>Demonstration<br>Video | Objective tests,<br>OSCE  |
| <ul style="list-style-type: none"> <li>▪ Wedging of plaster casts for correction of individual deformities in clubfoot</li> </ul>                   | Seminar<br>Demonstration<br>Video | OSCE  |
| <ul style="list-style-type: none"> <li>▪ Closed reduction and plaster spica application for developmental dysplasia of the hip</li> </ul>           | Seminar<br>Demonstration<br>Video | OSCE  |
| <ul style="list-style-type: none"> <li>▪ Tone inhibitions casts for spasticity in cerebral palsy</li> </ul>   | Seminar<br>Demonstration<br>Video | Objective tests,<br>OSCE  |
| <ul style="list-style-type: none"> <li>▪ Closed reduction of forearm, elbow, leg and ankle fractures</li> </ul>                                     | Seminar<br>Demonstration<br>Video | Objective tests,<br>OSCE<br>Checklist   |
| <ul style="list-style-type: none"> <li>▪ Denis-Browne splint for clubfoot</li> </ul>  | Seminar<br>Demonstration<br>Video | Objective tests,<br>OSCE<br>Checklist   |
| <ul style="list-style-type: none"> <li>▪ Pavlik harness for DDH</li> </ul>  | Seminar                           | Objective tests,  |

|   |                             |                                 |
|---|-----------------------------|---------------------------------|
| ▪ Orthoses for the lower limb for polio   | Demonstration Video         | OSCE Checklist                  |
| ▪   | Seminar Demonstration Video | OSCE                            |
| ▪ Orthoses for spina bifida   | Seminar Demonstration Video | OSCE                            |
| ▪ Orthoses for cerebral palsy   | Seminar Demonstration Video | OSCE                            |
| ▪ Skeletal dysplasias   | Seminar Demonstration Video | OSCE                            |
| ▪ Rhizomelic, mesomelic and acro-mesomelic dysplasias                                 | Seminar Video               | OSCE                            |
| ▪ Rickets of renal tubular origin   | Seminar Video               | Objective tests,                |
| ▪ Proximal tubular, distal tubular disorders  | Seminar Video               | Objective tests                 |
| ▪ Arthrotomy and drainage of septic arthritis of any joint of the upper or lower limb | Seminar Demonstration Video | Objective tests, OSCE Checklist |
| ▪ Posteromedial soft tissue release for clubfoot                                      | Seminar Demonstration Video | Objective tests, OSCE Checklist |
| ▪ Mid-tarsal osteotomy / tarsal curettage / talectomy                                 | Seminar Demonstration Video | Objective tests, OSCE Checklist |
| ▪ Tendon transfer eg. SPLATT / Tib.posterior transfer                                 | Seminar Demonstration Video | Objective tests, OSCE Checklist |
| ▪ Tendon lengthening procedures around the ankle, knee and hip for cerebral palsy     | Seminar Demonstration Video | Objective tests, OSCE Checklist |
| ▪ Proximal femoral osteotomy for Perthes' disease or for DDH                          | Seminar Demonstration Video | Objective tests, OSCE Checklist |
| ▪ Corrective osteotomies of the tibia or femur to                                     | Seminar                     | Objective tests,                |

|   |   |  |
|---|---|--|
| correct angular deformities   | Demonstration<br>Video<br>Seminar<br>Demonstration<br>Video | OSCE<br>Checklist<br>Objective test<br>OSCE<br>Checklist |
| ▪ Pinning of slipped upper femoral epiphysis  |   |  |
| ▪ Open reduction of developmental dysplasia of the hip  | Seminar<br>Demonstration<br>Video                           | Objective tests,<br>OSCE<br>Checklist                    |
| ▪ Managing all trauma of the upper and lower limb in a child  | Seminar<br>Demonstration<br>Video                           | Objective tests,<br>Checklist                            |
| ▪ Managing a child with osteogenesis imperfecta   | Seminar<br>Demonstration<br>Video                           | Objective tests,<br>Checklist                            |
| ▪ Manage benign lesions of the bone and soft tissues, understand principles of biopsy for malignant tumors and be able to do wide excision of minor tumor | Seminar<br>Demonstration<br>Video                           | Objective tests,<br>OSCE<br>Checklist                    |

## 2. EXTERNAL EVALUATION (SUMMATIVE ASSESSMENT)

On completion of training as above, the candidate would be eligible for appearing for the exit examination provided the periodic internal evaluation has been rated as satisfactory.

The examination would be conducted by the department.

### 2.1 THEORY EXAMINATION

The theory examination of 100 marks would include

MCQ's: 50 marks

Restricted response questions: 50 marks

Care would be taken to ensure that all aspects of paediatric orthopaedics included in the 12 modules are included in the range of questions and that equal weightage would be given for each module.

### 2.2 CLINICAL EXAMINATION

The candidate would be permitted to appear for the clinical examination ONLY after qualifying in the theory examination.

It is recommended that the practical examination should include Objective Structured Clinical examination in addition to case discussion.

- The CENTER OF EXAMINATION: The centre would be in candidates King George's Medical University, Lucknow.
- EXAMINERS: There would be one internal examiner and two external examiners appointed by the UNIVERSITY.

#### 2;3 VIVA-VOCE


Care would be taken to ensure that the viva-voce covers areas not evaluated in the theory and practical examination. It would include constructed response questions, rating scales, OSCE, Checklist and patient management problems.

#### AWARD OF THE FELLOWSHIP

The Fellowship would be awarded by the institution after the panel of examiners has certified that the candidate has successfully passed all the sections of the exit examination.

POSI body will be advised to certify that the candidate has completed the fellowship based on the recommendations of the head of the department of the accredited department and institution.

**Fellowship Fee:** Candidate has to deposit Rs. 1,00,000/- (One Lac only) to University in favour of course, hospitality of faculty of eminence if any and examination fee.

  
(Dr. Ajai Singh)