

**GANDHI INSTITUTE OF TECHNOLOGY AND MANAGEMENT (GITAM)  
(Deemed to be University)  
VISAKHAPATNAM \* HYDERABAD \* BENGALURU**

**Accredited by NAAC with A<sup>+</sup> Grade**



**REGULATIONS AND SYLLABUS**

**OF**

**MD Radio Diagnosis**

**(w.e.f. 2021-22 admitted batch)**

# **POSTGRADUATE TRAINING PROGRAMME FOR MD IN RADIOLOGICAL DIAGNOSIS – PMEDI09 (w. e. f. 2021-22 Admitted Batch)**

## **Preamble:**

The purpose of PG education is to create specialists who would provide high quality health care and advance the cause of science through research & training.

**The Goal** of this program is to impart training in conventional and modern radiology and imaging techniques so that the postgraduate student becomes well versed and competent to practice, teach and conduct research in the discipline of radiology. The student should also acquire basic knowledge in the various sub-specialties of radiology. These Guidelines also would also help to standardize Radiodiagnosis teaching at post graduate diploma (DMRD) level throughout the country so that it will benefit in achieving competent radiologist with appropriate expertise.

The purpose of this document is to provide teachers and learners illustrative guidelines to achieve defined outcomes through learning and assessment. This document was prepared by various subject-content specialists. The Reconciliation Board of the Academic Committee has attempted to render uniformity without compromise to purpose and content of the document. Compromise in purity of syntax has been made in order to preserve the purpose and content. This has necessitated retention of “domains of learning” under the heading “competencies”.

## **ELIGIBILITY CRITERIA FOR ADMISSION TO MD/MS COURSES**

The eligibility criteria for admission to MD/MS Courses is as follows:

- Candidates in possession of MBBS degree or Provisional MBBS Pass Certificate recognized as per the provisions of the NMC Act, 2019 and the repealed Indian Medical Council Act 1956 and possessing permanent or provisional registration certificate of MBBS qualification issued by the NMC / the erstwhile Medical Council of India or State Medical Council and have completed one year of internship or are likely to complete the internship as per NMC criteria, may apply for NEET-PG through online application system.
- The dates indicated by candidates with regard to 12 months Compulsory Rotating Resident Internship in the application form (i.e. internship starting and completion date) shall be treated as final and candidates will be required to submit the original Compulsory Rotating Resident Internship completion certificate at the time of counseling/admission in allotted Medical College/ Institute.
- The cut off dates for the recognition of the Medical Colleges, from where the candidates have passed their MBBS Degree Course and completed compulsory rotatory Internship for the year will be as prescribed by the NMC/ the erstwhile Medical Council of India. The Colleges recognized after the cut- off date prescribed by the NMC will not be considered.

- Registration with the NMC/ the erstwhile Medical Council of India or State Medical Council is necessary and its documentary proof should be furnished by the candidates on the day of examination and at the time of counseling/admission.
- The definition of NRI for admission to Deemed University shall be as per Hon'ble Supreme Court order dated 22/08/2017 in WP 689/2017.

#### **ELIGIBILITY CRITERIA FOR FOREIGN MEDICAL GRADUATES:**

- Indian citizens or overseas citizens of India who have obtained their Primary Medical Qualifications from Medical Colleges outside India should have qualified the Foreign Medical Graduate Examination (Screening Test) as per Screening Test Regulations, 2002 which is conducted by National Board of Examinations. Further, they should have been registered with the NMC/ the erstwhile Medical Council of India or State Medical Council and should have completed their internship or likely to complete their internship as per NMC criteria. Foreign Medical Graduates are required to bring their FMGE Pass certificate issued by NBE on their testing day along with the provisional/permanent registration certificate issued by a medical council.

#### **ELIGIBILITY CRITERIA FOR FOREIGN NATIONALS:**

- It is not mandatory for foreign nationals to have temporary registration with National Medical Commission (NMC) at the time of writing NEET-PG. Foreign Nationals can write NEET-PG without registration with NMC. The NMC may, on payment of the prescribed fee for registration, grant temporary registration for the duration of the Post Graduate course limited to the medical college/institution to which he/she is admitted for the time being exclusively for pursuing postgraduate studies. Provided further that temporary registration to such foreign national shall be subject to the condition that such person is duly registered with appropriate registering authority in his own country where from he has obtained his Basic Medical qualification, and is duly recognized by the corresponding Medical Council or concerned authority.

#### **PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)**

- The objective of the program is to train a student to become a skilled and competent radiologist to conduct and interpret various diagnostic/interventional imaging studies (both conventional and advanced imaging), to organize and conduct research and teaching activities and be well versed with medical ethics and legal aspects of imaging/ intervention.

#### **PROGRAM OUTCOMES (POs):**

1. Acquire good basic knowledge in the various sub-specialties of radiology such chest radiology and cardio-vascular radiology.
2. Acquire good basic knowledge in the various sub-specialties of radiology such as emergency radiology, GI-radiology and uroradiology.
3. Acquire good basic knowledge in the various sub-specialties of radiology neuroradiology and interventional radiology.

4. Acquire good basic knowledge in the various sub-specialties of radiology such as musculoskeletal, paediatric radiology and women's imaging.
5. Independently conduct and interpret all routine and special radiologic and imaging investigations.

#### **PROGRAM SPECIFIC OUTCOMES (PSOs)**

1. Provide radiological services in acute emergency and trauma including its medico-legal aspects.
2. Elicit indications, diagnostic features, and limitations of applications of ultrasonography, CT, and MRI.
3. Describe proper cost-effective algorithm of various imaging techniques in a given problem setting.
4. Decide on the various image-guided interventional procedures to be done for diagnosis and therapeutic management.
5. Decide on further specialization to be undertaken in any of the branches in Radio diagnosis such as gastrointestinal radiology, uro-radiology, neuro-radiology, vascular radiology, musculoskeletal radiology, interventional radiology etc.
6. Formulate basic research protocols and carry out research in the field of radiology-related clinical problems.
7. Acquire knowledge and teaching capabilities to work as a post-graduate student /consultant in Radio diagnosis.
8. Conduct teaching programs for undergraduates, postgraduates as well as paramedical and technical personnel.
9. Interact with other specialists and super-specialists so that maximum benefit accrues to the patient.
10. Organize CME activities in the specialty utilizing modern methods of teaching and evaluation.
11. Acquire knowledge to impart training in both conventional radiology and modern imaging techniques so that the postgraduate student is fully competent to practice, teach and do research in the broad discipline of radiology including ultrasound, Computed Tomography and Magnetic Resonance Imaging.
12. Acquire knowledge of interventional radiology of common vascular interventions e.g stricture dilatation using balloon catheters, embolization with gel foam and other agents, names of common catheters.
13. Acquire knowledge on techniques, indications and contraindications for various procedures

#### **PROGRAMME SPECIFIC COMPETENCIES:**

##### **A. Cognitive Domain**

A post graduate student on completing MD (Radiodiagnosis) should acquire knowledge in the following areas, and be able to:

1. Acquire good basic knowledge in the various sub-specialties of radiology such as chest radiology, neuro-radiology, GI-radiology, uro-radiology, cardio-vascular- radiology, musculoskeletal, interventional radiology, emergency radiology, pediatric radiology

and women's imaging.

2. Independently conduct and interpret all routine and special radiologic and imaging investigations.
3. provide radiological services in acute emergency and trauma including its medico-legal aspects.
4. Elicit indications, diagnostic features and limitation of applications of ultrasonography, CT and MRI and should be able to describe proper cost- effective algorithm of various imaging techniques in a given problem setting.
5. Decide on the various image-guided interventional procedures to be done for diagnosis and therapeutic management.
6. Able to decide on further specialization to be undertaken in any of the branches in Radiodiagnosis such as gastrointestinal radiology, uro-radiology, neuro-radiology, vascular radiology, musculoskeletal radiology, interventional radiology etc.
7. Able to formulate basic research protocols and carry out research in the field of radiology- related clinical problems.
8. Acquire knowledge and teaching capabilities to work as a post graduate student /consultant in Radiodiagnosis and conduct teaching programmes for undergraduates, post graduates as well as paramedical and technical personnel.
9. interact with other specialists and super-specialists so that maximum benefit accrues to the patient.
10. Should be able to organize CME activities in the specialty utilizing modern methods of teaching and evaluation.
11. Acquire knowledge to impart training in both conventional radiology and modern imaging techniques so that the post graduate student is fully competent to practice, teach and do research in the broad discipline of radiology including ultrasound, Computed Tomography and Magnetic Resonance Imaging.
12. Acquire knowledge of interventional radiology.

#### **B. Affective Domain:**

1. Should be able to function as a part of a team, develop an attitude of cooperation with colleagues, and interact with the patient and the clinician or other colleagues to provide the best possible diagnosis or opinion.
2. Always adopt ethical principles and maintain proper etiquette in dealings with patients, relatives and other health personnel and to respect the rights of the patient including the right to information and second opinion.
3. Develop communication skills to word reports and professional opinion as well as to interact with patients, relatives, peers and paramedical staff, and for effective teaching.

#### **C. Psychomotor domain**

Practical Training will include two major aspects:

- A) Interpretation of images, and

B) Skill in performing a procedure.

**A) Interpretation of images:**

**The student should be able to interpret images on all imaging modalities of diseases of following organs :**

1. **Musculo-skeletal System** - Interpretation of diseases of muscles, soft tissue, bones and joints including congenital, inflammatory, traumatic, endocrine and metabolic, neoplastic and miscellaneous conditions.
2. **Respiratory System** - Interpretation of diseases of the chest wall, diaphragm, pleura and airway; pulmonary infections, pulmonary vasculature; pulmonary neoplasm; diffuse lung disease; mediastinal disease, chest trauma; post-operative lung and X-ray in intensive care.
3. **Cardiovascular System** - Interpretation of diseases and disorders of cardiovascular system (congenital and acquired conditions) and the role of imaging by conventional radiology, ultrasound, colour Doppler, CT, MRI, Angiography and Isotopes Studies.
4. **Gastro-intestinal tract and hepato-biliary pancreatic system** - Interpretation of diseases and disorders of mouth, pharynx, salivary glands, esophagus, stomach, small intestine, large intestine, diseases of omentum, peritoneum and mesentery: acute abdomen, abdominal trauma. Diseases and disorders of liver, biliary system and pancreas.
5. **Urogenital System** - Interpretation of various diseases and disorders of genitor-urinary system. These include: congenital, inflammatory, traumatic, neoplastic, calculus disease and miscellaneous conditions.
6. **Central Nervous System (C.N.S.)** - Interpretation of diseases and disorders of the head, neck and spine covering, congenital, infective, vascular, traumatic neoplastic degeneration metabolic and miscellaneous condition.
7. Imaging in Emergency Medicine.
8. Imaging in Obstetrics and Gynecology.
9. Imaging of Breast and interventional procedures.
11. ENT, EYE and Dental Imaging.
11. Imaging of endocrine glands and those involved with metabolic diseases.
12. Clinical applied radionuclide imaging.
13. Interventional Radiology

**B) Skills in performing a procedure**

**The student should be able to perform the following procedures:**

- 1) **GIT contrast studies:** Barium studies (swallow, upper GI, Follow through, enema); fistulogram; sialogram; cologram/ileostogram,
- 2) **GU:** Excretory urography, MCU, RGU, nephrostogram, genitogram,
- 3) **Ultrasound:** Studies of whole body including neonatal transfontanell studies, Doppler studies,
- 4) **CT scan:** should be able to position a patient, plan study as per the clinical indication, do reconstruction of images, perform triple phase study, perform & interpret advanced applications like CT enterography, CT angiography etc.

- 5) **MRI:** plan and perform MRI studies of whole body
- 6) **DSA:** should be able to describe the techniques, do (if available to student) transfemoral puncture and insert catheter, help in angiographic procedures both diagnostic and interventional.
- 7) **Radiography:** should be able to independently do radiography of common and some important uncommon views of different body parts. This includes positioning, centering of X ray beam, setting of exposure parameters, exposing and developing the films. The student should be familiar with not only conventional radiography but with CR and DR systems.
- 8) **Interventional radiology:** The student should be able to perform simple, common non-vascular procedures under ultrasound and fluoroscopy guidance e.g. abscess drainage, drainage catheter placement, nephrostomy, biliary drainage etc. The student should have knowledge of common vascular interventions e.g stricture dilatation using balloon catheters, embolization with gel foam and other agents, names of common catheters, handling of intravenous contrast reactions; techniques, indications and contraindications for various procedures;

## **SYLLABUS**

### **Course contents:Anatomy**

Gross and cross sectional anatomy of all the body systems.

### **Pathology**

Gross morphology of pathological conditions of systemic diseases affecting all organ systems.

### **Radiology Course**

This would cover imaging and interventions of diseases affecting all the body systems:

- Chest
- Cardiovascular system
- Musculoskeletal including soft tissue
- Gastrointestinal system
- Hepato-biliary-pancreatic system
- Urogenital (genito-urinary) system
- CNS including head and neck
- Obstetrics and gynaecology
- ENT, eye, dental, breast
- Endocrine and metabolic system
- Clinically applied radionuclide imaging

### **Radiological Physics**

1. Introduction of general properties of radiation and matter: Fundamentals of nuclear physics and radioactivity
2. Interaction of x-rays and gamma rays with matter and their effects on irradiated materials

3. X-ray Generating Apparatus
4. Screen-film radiography
5. Film processing: Dark room, dry processing, laser /dry chemistry cameras, artifacts.
6. Fluoroscopy: Digital including flat panel units, fluoroscopy cum radiography units
7. Digital radiography: Computed Radiography, Flat panel radiography
8. Other equipments: Ultrasound including Doppler, CT, MRI and DSA
9. Contrast Media (Iodinated, MR & Ultrasound) - types, chemical composition, mechanism of action, dose schedule, route of administration, adverse reaction and their management
10. Nuclear Medicine: Equipments and isotopes in various organ systems and recent advances
11. Picture Archiving and Communication System (PACS) and Radiology Information System (RIS) to make a film-less department and for Teleradiology
12. Radiation protection, dosimetry and radiation biology
13. Image quality and Quality Assurance (QA)
14. Recent advances in radiology and imaging

The student should have knowledge of the following physics experiments:

- Check accuracy of kVp and timer of an X ray unit
- Check accuracy of congruence of optical radiation field
- Check perpendicularity of x ray beam
- Determine focal spot size
- Check linearity of timer of x ray unit
- Check linearity of mA
- Verification of inverse square law for radiation
- Check film screen contact
- Check film screen resolution
- Determine total filtration of an x ray unit
- Processor quality assurance test
- Radiological protection survey of an x ray unit
- Check compatibility of safe light
- Check performance of view box
- Effect of kVp on x ray output

### **Radiography and processing techniques**

1. Processing techniques: includes dark room and dry processing.
2. Radiography of the musculo-skeletal system including extremities.
3. Radiography of the chest, spine, abdomen and pelvic girdle.
4. Radiography of the skull, orbit, sinuses.
5. Contrast techniques and interpretation of GI tract, hepato-biliary tract, pancreas etc.
6. Contrast techniques and interpretation of the Central Nervous system.
7. Contrast techniques and interpretation of the cardiovascular system including chest.
8. Contrast techniques and interpretation of the genito - urinary system including Obstetrics and Gynaecology.



9. Paediatric radiology including MCU, genitogram, bone age.
10. Dental, portable and emergency (casualty) radiography.

### **COURSE OUTCOMES (Cos):**

1. Acquire good basic knowledge in the various sub-specialties of radiology such as chest radiology, neuro-radiology, GI-radiology, uro-radiology, cardio-vascular-radiology, musculoskeletal, interventional radiology, emergency radiology, pediatric radiology and women's imaging.
2. Independently conduct and interpret all routine and special radiologic and imaging investigations.
3. provide radiological services in acute emergency and trauma including its medico-legal aspects.
4. Elicit indications, diagnostic features and limitation of applications of ultrasonography, CT and MRI and should be able to describe proper cost-effective algorithm of various imaging techniques in a given problem setting.
5. Decide on the various image-guided interventional procedures to be done for diagnosis and therapeutic management.
6. Able to decide on further specialization to be undertaken in any of the branches in Radiodiagnosis such as gastrointestinal radiology, uro-radiology, neuro-radiology, vascular radiology, musculoskeletal radiology, interventional radiology etc.
7. Able to formulate basic research protocols and carry out research in the field of radiology-related clinical problems.
8. Acquire knowledge and teaching capabilities to work as a post graduate student /consultant in Radiodiagnosis and conduct teaching programmes for undergraduates, post graduates as well as paramedical and technical personnel.
9. Interact with other specialists and super-specialists so that maximum benefit accrues to the patient.
10. Should be able to organize CME activities in the specialty utilizing modern methods of teaching and evaluation.
11. Acquire knowledge to impart training in both conventional radiology and modern imaging techniques so that the post graduate student is fully competent to practice, teach and do research in the broad discipline of radiology including ultrasound, Computed Tomography and Magnetic Resonance Imaging.
12. Acquire knowledge of interventional radiology.

### **TEACHING AND LEARNING METHODS**

**The training is spread over 3 years and includes following components:**

1. Physics related to imaging
2. Rotational posting in various sub-specialties.
3. Seminars, case discussion, journal club.
4. Research methodology and statistics.
5. A log book should be maintained by the student and will be checked and signed regularly by the faculty-in-charge during the training program.
6. The postgraduate students shall be required to participate in the teaching and training program of undergraduate students and interns.

7. The postgraduate student would be required to present one poster presentation, to read one paper at a national/state conference and to submit one research paper which should be published or accepted for publication or sent for publication to a peer reviewed journal, during the period of his/her postgraduate studies so as to make him/her eligible to appear at the postgraduate degree examination.
8. Department should encourage e-learning activities.

**Rotations:**

**During the three-year course, suggested rotations are as follows: -**

1. Conventional chest, abdomen, musculoskeletal including skull, spine, PNS and mammography etc
2. Contrast studies: G.U., GIT, Hepato-biliary, 8 months angiography etc including fluoroscopic guided interventions
3. US, Doppler and US guided interventions 8 Months
4. CT and CT guided interventions 6 Months
5. Emergency radiology 2 Months
6. M.R.I. 2 Month
7. Elective posting 2 Months

During each posting, post graduate student should be able to perform the procedures and interpret the findings.

**PROPOSED SCHEDULE FOR ROTATION**

1 <sup>st</sup> Year(1/6)	Conventional Chest & abdomen	Conventional skull, spine, musculo-skeletal etc.	U S	Contrast studies - GIT & other fluoroscopic investigations	Contrast studies - G.U. tract	U S
(2/6)	US & interventions	Conventional skull, spine, musculo-skeletal etc.	C T	Contrast studies -- GIT & other fluoroscopic investigations	Contrast studies - G.U. tract	U S & i n t e r v e - n t i o n s
2 <sup>nd</sup> Year (3/6)	Conventional Chest & abdomen	Contrast studies - GIT & other fluoroscopic interventions	C o n t r a s t s t u d i e	US & interventions	E m e r g e n c y	C T

		estigati ons incl udi ng ang iogr aphy	s - G · U · t r a c t			
( 4 / 6 )	Conventio nal skull, spine, musculo-skeletal etc.	Con tras t stud ies - G. U. trac t incl udi ng ped iatri c MC U/g enit o- gra m	U S & i n t e r v e n t - i o n s	US & Dopple r	E m e r g e n c y	M R I
3 r d y e a r  ( 5 / 6 )	Conventio nal  Chest & mammo- graphy	Co ntra st stu dies - GI T & oth er fluo ros cop ic inv esti gati ons incl udi ng ang iogr aphy	U S & D o p p l e r	Emerge ncy	C T & i n t e r - v e n t i o n s	E l e c t i v e
( 6 / 6 )	Conventio nal musculo-skeletal & mammo- graphy	Co ntra st stu dies - G. U. trac t incl udi ng ped iatri	C T & i n t e r - v e n t	CT & inter-vention s	M R I	E l e c t i v e

		c	i		
		MC	o		
		U/g	n		
		enit	s		
		o-			
		gra			
		m			

**During the training programme, patient safety is of paramount importance; therefore, skills are to be learnt initially on the models, later to be performed under supervision followed by performing independently. For this purpose, provision of skills laboratories in medical colleges is mandatory.**

## ***ASSESSMENT***

### **FORMATIVE ASSESSMENT, during the training programme**

**Formative assessment should be continual and should assess medical knowledge, patient care, procedural & academic skills, interpersonal skills, professionalism, self-directed learning and ability to practice in the system.**

#### **General Principles**

Internal Assessment should be frequent, cover all domains of learning and used to provide feedback to improve learning; it should also cover professionalism and communication skills. The Internal Assessment should be conducted in theory and practical/clinical examination.

**Quarterly assessment during the MD training should be based on:**

- 1. Journal based / recent advances learning**
- 2. Patient based /Laboratory or Skill based learning**
- 3. Self-directed learning and teaching**
- 4. Departmental and interdepartmental learning activity**
- 5. External and Outreach Activities / CMEs**

**The student to be assessed periodically as per categories listed in postgraduate student appraisal form (Annexure I).**

**SUMMATIVE ASSESSMENT, i.e., assessment at the end of training** The summative examination would be carried out as per the Rules given in **POSTGRADUATE MEDICAL EDUCATION REGULATIONS, 2000.**

#### **Postgraduate Examination**

The Post Graduate Examination was conducted in three parts.

##### **1. Thesis:**

Every post graduate student shall carry out work on an assigned research project under the guidance of a recognized Post Graduate Teacher, the result of which shall be written up and submitted in the form of a Thesis (Dissertation). Work for writing the Thesis is aimed at contributing to the development of a spirit of enquiry, besides exposing the post graduate student to the techniques of research, critical analysis, acquaintance with the latest advances in medical science and the manner of

identifying and consulting available literature.

Thesis shall be submitted at least six months before the Theory and Clinical / Practical examination. The thesis shall be examined by a minimum of two external examiners, who shall not be the examiners for Theory and Clinical examination. A post graduate student shall be allowed to appear for the Theory and Practical/Clinical examination only after the acceptance of the Thesis by the examiners.

## **2. Theory Examination**

The examinations shall be organized on the basis of 'Grading' or 'Marking system' to evaluate and to certify post graduate student's level of knowledge, skill and competence at the end of the training. Obtaining a minimum of 50% marks in 'Theory' as well as 'Practical' separately shall be mandatory for passing examination as a whole. The examination for M.D. shall be held at the end of 3rd academic year. An academic term shall mean six month's training period.

There shall be four theory papers:

- Paper I:** Basic sciences related to Radiology (consists of Anatomy, Pathology, Basic and Radiation Physics, Imaging Techniques, and Film processing).
- Paper II:** Chest, CVS, CNS including Head & Neck, Eye, ENT, musculo-skeletal, pediatric radiology and Mammography.
- Paper III:** Abdominal Imaging including GI, GU, Hepatobiliary, endocrine and metabolic, Obstetrics and Gynaecology and Interventional radiology
- Paper IV:** Recent advances, nuclear medicine; Radiology related to clinical specialties

All papers would consist of short answer questions (minimum 10) covering all aspects of the course.

## **3. Practical/clinical and oral Examination (will include cases, spots, ultrasound procedure, physics, implements etc)**

Practical Examination will have:

1. 3-4 Cases
2. Film Quiz (50 – 60 Spots)
3. To perform Ultrasound on a patient

Oral/Viva voce will include:

- Radiation Physics and quality assurance
- Implements, Catheters and contrast
- Cassettes, films, dark room, equipment
- Radiographic techniques, Radiological procedures,
- Gross pathology

## **REFERENCES:**

**Suggested Reading:** Books (latest edition)

1. Grainger & Allison's Text book of Diagnostic Radiology (Churchill Livingstone)
2. Textbook of Gastrointestinal Radiology- Gore and Levine (Saunders)
3. MRI of Brain and Spine - Scott Atlas (LWW)

4. Diagnosis of Diseases of the Chest -Fraser
5. Diagnostic Imaging Series: (Amirsys, Elsevier)  
Abdominal Imaging, Orthopedics, Head and Neck, Neuroradiology, Pediatric Radiology Chest, Obstetrics, Breast
6. MRI in Orthopedics and Sport Injuries - Stoller
7. Skeletal Radiology - Greenspan
8. Abdominal-Pelvic MRI - Semelka (IWW)
9. Caffey's Pediatric Radiology
10. CTI and MRI of the whole body- John R. Haaga
11. Text Book of Radiology and imaging - Davod sulton
12. Diagnostic ultrasound - Carol C. Rumack
13. AIIMS-MAMC-PGI's Comprehensive Textbook of Diagnostic Radiology, Volumes 1, 2, 3

### **Journals**

03-05 international Journals and 02 national (all indexed) journals

1. American Journal of Roentgenology
2. Radiology
3. Seminars in Ultrasound, CT, MRI
4. Radiographics
5. Clinical Radiology
6. British Journal of Radiology
7. Radiological Clinics of North America
8. Pediatric Radiology
9. Australasian Radiology
10. Journal of Computerized Axial Tomography
11. Clinical Imaging
12. MR Clinics of North America
13. Seminars in Roentgenology

Postgraduate Students Appraisal Form Pre / Para / Clinical Disciplines

Name of the Department/Unit :

Name of the PG Student :

Period of Training : FROM.....TO.....

S r . N o .	PART ICUL ARS	N o t S a t i s f a c t o r y	S a t i s f a c t o r y	M o r e T h a n S a t i s f a c t o r y	R e m a r k s
1.	Journal based / recent advances learning				
2.	Patient based /Laboratory or Skill based learning				
3.	Self directed learning and teaching				
4.	Departmental and interdepartmental learning activity				
5.	External and Outreach Activities / CMEs				
6.	Thesis / Research work				
7.	Log Book Maintenance				

Publications

Yes/ No

Remarks\* \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**\*REMARKS: Any significant positive or negative attributes of a postgraduate student to be mentioned. For score less than 4 in any category, remediation must be suggested. Individual feedback to postgraduate student is strongly recommended.**