

## **CERTIFICATE COURSE IN CT & MRI**

**Duration :** 12 months

**Need :** Presently two to three years recognised courses are available after secondary school in Radiography which primarily concentrate on conventional radiology with some basic knowledge on CT and MRI.

With advancements in CT & MRI technology, applications and increasing installations of CT & MRI in the country it has become essential to start a special course training the qualified radiographers / technologists to operate / handle and manage these advanced modalities. The course assumes importance as the CT & MRI technology is complex but at same time has lot to offer to a patient. The number of different types of procedures which can be performed on CT & MRI are many - like CT coronary angiography, CT enterography, CT cisternography, Virtual bronchoscopy, virtual colonoscopy etc. on CT and on MRI - MRCP, MRA, MRU, Spectroscopy etc. With improvements and advancements in technology the number of these special procedures is increasing everyday further necessitating special course in CT & MRI

## ANNEXURE - III

### **Qualification:**

1. Two or three years (Degree / Diploma ) course in Radiography with internship

### Syllabus

#### **FOR C T :**

1. Principles of CT imaging
2. QA testing for CT
3. Basic knowledge on computers
4. Basic knowledge on image parameters
5. Special Instructions for different procedures
6. Preparation of patient
7. Contraindications of CT – Absolute and Relative
8. Positioning of patient for various scans
9. Radiation Hazards
10. AERB rules , regulations related to CT
11. ALARA principle and its application
12. CT sectional Anatomy
13. Knowledge about common disease
14. Common Indications
15. Contrast Agents in CT
16. Management of contrast reactions
17. Basics of BLS , Code Blue
18. Operation of CT machine
19. How to handle emergencies
20. Image artefacts and how to handle
21. Do's & Don'ts in CT Room
22. Post processing of the data
23. Filming / Data presentation

## **FOR MRI**

1. Principles of MRI imaging
2. QA testing for MRI
3. Basic knowledge on computers
4. Basic knowledge on sequences – When and Where
5. Special Instructions for different procedures
6. Preparation of patient
7. Contraindications of MRI – Absolute and Relative
8. Positioning of patient for various scans
9. Magnetic effects / side effects
10. MRI sectional Anatomy
11. Knowledge about common disease
12. MRI Indications
13. Contrast Agents in MRI
14. Management of contrast reactions
15. Operation of MRI machine
16. How to handle emergencies
17. Magnet Quench
18. Do's & Don'ts in MRI Room
19. MR compatible life saving equipments & their use – When, Where and Why
20. Post processing of the data
21. Filming / Data presentation

## **Proposed Exam Before Certificate Award**

### **Examiner :**

1. One Radiologist
2. One Senior Radiographer working on MRI & CT (for each modality)

**Paper 1** : Theory : 200 Marks

**Paper 2** : Practical : 300 Marks

Student must pass in both separately.

### **CENTRES / HOSPITALS ELIGIBLE TO CONDUCT THESE COURSES**

1. Should have running multi slice CT & 1.5 T or higher strength MRI for last 5 years.
2. At least one Radiologist and one technician should have been working on CT & MRI each for last five years
3. Centre should be NABH accredited.