

**Mahatma Gandhi Vidyamandir's
M S G Arts, Science and Commerce College Malegaon Camp (Nashik)**

Department of Physics

Academic Year 2023-2024

Report of Field Visit: X-Ray Lab, Cardiac Lab and CT Scan Lab

The Department of Physics, M.S.G. Arts, Science and Commerce College, Malegaon Camp organized a field visit to **Suyash Diagnostic City Scan Centre Malegaon (Nashik)**, on August ,26, 2024 at 2:00 PM.

For the Field Visit, all the students of T Y B.Sc. and M Sc (Physics) were informed about the schedule and area of visit one day before. On the same day, visit started sharply at 1.30 PM. Under the guidance of Principal Dr. C G Dighavkar and Dr. A. S Garde (Head Department of Physics) the students along with teachers Mr. C. R. Yewale, Mr. S U Tiwari ,Mr. S S Mandwade, Mr. A S Mayacharya, Mr. H D Sonawane and Participants reached the Suyash Diagnostic Centre located at Malegaon, Satana road from the college at about 1.30 PM. where the head of Centre **Dr. Yogesh Shivaji Patil (MD Physician)** welcomed us. Dr Patil introduced his staff and employers and also gave brief Introduction about the function of Centre to the Students. The purpose of this visit was to gain a practical understanding of the diagnostic imaging processes, equipment, and the role they play in modern healthcare. The labs are crucial in aiding medical professionals in diagnosing various conditions accurately.

X-Ray Lab

The X-ray lab is an essential diagnostic facility within the hospital. During the visit, We Participants and Staff has observed the following aspects

Equipment: The lab was equipped with various types of X-ray machines, including fixed and portable units. The fixed units were installed in specially designed rooms with lead shielding to protect both patients and staff from radiation exposure. The portable units were used for patients who couldn't be moved to the lab.

Procedure: The radiology technologist demonstrated the X-ray process. Patients were positioned as required by the physician, and the technologist ensured that the patient's body part of interest was appropriately aligned with the X-ray machine. The technologist then activated the machine to capture the image, which took only a few seconds. The image was then sent to the radiologist for interpretation.



X-Ray Lab

Safety Measures: The lab followed strict safety protocols to minimize radiation exposure. Lead aprons and shields were provided to patients and staff, and the technologists wore dosimeters to monitor their radiation exposure over time.

CT Scan Lab

The CT Scan Lab offered a more detailed and three-dimensional view of the internal structures of the body. Key observations during the visit included

Equipment: The lab had state-of-the-art CT scanners. These machines utilized advanced technology to take cross-sectional images of the body, allowing for precise visualization of organs, tissues, and abnormalities.

Procedure: Patients were positioned on the CT scanner table, which then moved through the circular opening of the machine. As the table moved, the scanner emitted X-ray beams from various angles to create detailed cross-sectional images. The data obtained was processed by a computer to generate 3D images.

Contrast Agents: In some cases, contrast agents were used to enhance visibility of certain structures. The technologist would administer the contrast agent either orally or through an IV line before the scan.



CT Scan Lab

Radiation Dose Management: The lab emphasized radiation dose management, using techniques like dose modulation and iterative reconstruction to minimize patient radiation exposure while maintaining image quality.

Conclusion:

The field visit to the X-Ray Lab and CT Scan Lab was an enlightening experience. I gained valuable insights into the working of diagnostic imaging facilities, the importance of safety measures, and the role these technologies play in modern medical practice. The professionalism of the staff and the advanced equipment at Suyash Diagnostic City Scan Centre left a lasting impression on me. This visit reinforced the significance of diagnostic imaging in early and accurate disease diagnosis, ultimately contributing to improved patient care and outcomes.

I would like to extend my gratitude to the staff at Suyash Diagnostic City Scan Centre for accommodating my visit and providing me with this educational opportunity.

(Dr. A S Garde)

Head

Department of Physics

Attachments:





Asgarde
(Dr. A S Garde)
Head
Department of Physics