CT procedure and Imaging Process BVORAD-304

**UNIT -1**

Patient Preparation for CT,Patient Positioning for CT

Various CT protocols in plain and contrast for different areas of interest, Spiral CT protocol in plain and contrast for Head,Spiral CT protocol in plain and contrast for Neck,Spiral CT protocol in plain and contrast for Chest,Spiral CT protocol in plain and contrast for Abdomen/Pelvis,Spiral CT protocol in plain and contrast for Vascular System, Spiral CT protocol in plain and contrast for Bone,Importance of positioning, Precautions to be taken for preparing & positioning the patient.

**UNIT-2**

Data Acquiring Concepts,Basic concept of data acquisition. Data acquisition geometrics, Slip-Ring Technology, Design and Power Supply of a CT Room.,Advantages of Slip-Ring Technology,CT Detector Technology,Characteristics of the Detector,List and describe the Types of Detectors, Explain Plug-in Detector Modules., Describe Multi-Slice Detectors, Detector Electronics, Functions of Detectors, Components of Detectors,Data Acquisition and Sampling.

**UNIT 3**

CT Scan of Brain (Plain)

CT Scan of Brain (Plain + Contrast)

CT Scan of Orbit (Plain)

CT Scan of Temporal Bones (Axial)

CT Scan of Paranasal Sinus (Coronal)

CT Scan of Neck (Plain)

CT Scan of Chest (Plain)

CT Scan of H R C T Chest

CT Scan of Abdomen and Pelvis (Plain)

**UNIT-4**

Sequence of events after the signals leave the CT detectors, State the Algorithm, Explain the Fourier transform,Explain the Convolution, Explain the End Interpolation, Trace the History of Reconstruction Techniques.,Identify the problems in CT,filter back projection,IterativeAlgorithms.,FourierReconstruction.,Image Reconstruction in Single and Multiple Slice Spiral/Helical CT,Types of data in Image Reconstruction,Comparison of Reconstruction Algorithms, 3D Algorithm,CT artifact.