

MD RADIODIAGNOSIS FINAL EXAM QUESTIONS

(Arranged Book & Chapter wise)

AIIMS-MAMC-PGI's comprehensive textbook of Diagnostic Radiology

Chapter- 01 : Evaluation of Plain X-Ray skull : A systematic Approach

- Write an essay on 'Intra Cranial Calcification' (2010)
- Describe physiological & pathological causes of calcifications in brain. (1996)
- **Short notes:**
 - Intra Cranial Calcifications (1999) Physiological intracranial calcification (1993)

Chapter- 03 : Normal Cerebral Angiography

- Angiography of the head and neck vessels (2012)
- Describe the procedure of 'Carotid angiography'. Enumerate the supratentorial vascular lesions which can be diagnosed by this investigation (2000)

Chapter- 04 : Advances in Computed Tomography Technology

- Discuss the role of CT in the diagnosis of brain lesions (2000)
- Discuss the role of CT in the diagnosis of brain tumors (1992)

Chapter- 05 : Advances in Neuroimaging Techniques : Magnetic Resonance Imaging

- Role of MR perfusion imaging in grading of brain tumors (2012)
- Discuss the role of MRI in various brain tumors (1996) (1992)

Chapter- 06 : Magnetic Resonance Spectroscopy

- Write an essay on M. R. Spectroscopy (2015)
- Role of MRS in grading of brain tumors (2012)
- **Short notes:**
 - M. R. Spectroscopy (MRS) (2013) (2006) (2000)
 - M. R. Spectroscopy and chemical shift imaging (2005)

Chapter- 08 : Imaging and Interventions in Cerebral Ischemia

- Role of CT & MR in stroke (2017)
- Role of radiologist in management of hypertensive & diabetic patient with sudden fall from stairs (Emphasize on neuroanatomy) (2017)
- How will you approach radiologically in early case of stroke and its clinical applications (2010) [Correlate with Ch. 8 of Osborn's Brain]
- Describe the various imaging modalities employed to study the arterial supply of brain. (2007)
- Role of M.R. in stroke (2007)

Chapter- 09 : Imaging of Subarachnoid Hemorrhage

- **Short notes:**
 - Mycotic aneurysm (2009)

Chapter- 13 : Central nervous System Infections

- Describe the role of radiology in assessment of intracranial infections (2015)
- Neurocysticercosis (2012)

Chapter- 14 : White matter Diseases and Metabolic Brain Disorders

- Multiple sclerosis (2017) (2009) [Correlate with Ch. 15 of Osborn's Brain]

Chapter- 15 : Current Trends in Imaging of Epilepsy

- Metabolic imaging of epilepsy (2012)

Chapter- 16 : Imaging of Supratentorial Tumors

- Write an essay on supra tentorial tumors of brain (1999)

Chapter- 17 : Imaging of Infratentorial Tumors

- Enumerate the post-cranial fossa tumors and describe the CT and MR findings of these tumors (2017) (2002) (2000)
- Enumerate various lesions of CP angle (Intra cranial) and describe their imaging characteristics (2013)
- Describe the role of imaging modalities in C.P. angle tumors (2011)

Chapter- 18 : Sellar and Parasellar Lesions

- Describe the imaging features of supra-sellar lesions (2005)

Chapter- 20 : Imaging of the Temporal Bone

- Anatomy of middle ear in relevance of middle ear disease on multislice CT (2011)

Chapter- 21 : Imaging of the Globe and Orbit

- **Short notes:**
 - Orbital pseudotumor (2005)

Chapter- 22 : Imaging of the Paranasal Sinuses

- Describe CT anatomy of Para-nasal sinuses (2012)

Chapter- 23 : Imaging of the Neck Spaces

- Cervical lymph node stations and their imaging (2011)
- Prevertebral soft tissue mass in the cervical region (1992) [Correlate with Ch. 24 & 25 of AIIMS-MAMC-PGI's]

Chapter- 24 : Thyroid imaging

- **Short notes:**
 - Role of scintigraphy in thyroid lesions (2007)
 - Role of Isotopes in thyroid disease (2003) (2001) (1997)
 - Radioactive tracers in thyroid scanning (1999) (1994) (1993)

Chapter- 27 : Maxillofacial Imaging : Imaging of Cysts, Tumors and Tumor like conditions of Jaw

- **Short notes:**
 - Pantomography (2000) (1999)

Chapter- 29 : Endovascular management of Craniofacial Vascular lesions

- Describe the imaging features of juvenile nasopharyngeal angiofibroma. Discuss the role of radiological interventions in its management. (2015)

Chapter- 30 : Imaging of Head trauma

- Discuss imaging features of Extra-axial hemorrhage in head injury (2008)
- Write an essay on Cranial trauma (2002)

- **Short notes:**
 - Types and imaging appearances of intracranial hemorrhage on CT (2013)
 - Cerebral edema (2006)

Chapter- 33 : Imaging of Spinal Neoplasms

- **Short notes:**
 - Sacrococcygeal teratoma (2017)
 - Radiological diagnosis of extra-dural spinal masses (2015)
 - Role of MRI in spinal tumors (2011) (1997)

Chapter- 35 : Imaging of Low Backache

- How would you radiologically investigate a case of spinal cord compression (2010)
- Role of MRI in intervertebral disc disease. How it is superior to CT (1995)

Chapter- 40 : Ultrasound Elastography : Principles and Applications

- Elastography on ultrasound (2011)
- Principle and applications of sonoelastography (2012)
- Application of elastography ultrasound for musculoskeletal lesions (2011)
- **Short notes:**
 - Elastography (2013) (2011) (2010)

Chapter- 41 : Computed Tomography Hardware : An update

- Discuss principles of CT and changes in technology over the years. Describe the clinical uses of subsecond spiral CT scanner (2005)
- **Short notes:**
 - Evolution of CT machines (2001)

Chapter- 42 : Dual – energy Computed tomography

- Discuss the principle of Dual energy CT. Describe its role in abdominal lesions (2012)

Chapter- 44 : Magnetic Resonance Instrumentation : An Update

- Describe the magnets used in modern MRI-equipment (2005)
- **Short notes:**
 - 3 Tesla MRI (2008)

Chapter- 46 : Diffusion Weighted Magnetic Resonance Imaging

- **Short notes:**
 - Diffusion Tensor Imaging (DTI) (2017) (2010)
 - Diffusion weighted imaging (DWI) (2017)
 - Diffusion weighted MRI in Carcinoma cervix (2015)

Chapter- 47 : Functional Magnetic Resonance : Perfusion and dynamic Contrast-enhanced MRI

- Describe in detail Functional MR imaging (2005) (2003)

Chapter- 48 : Magnetic Resonance Angiography

- How will you perform MR angiography (2005)
- **Short notes:**
 - MR angiography (2011) (2008) (2004) (2000) (1998)

Chapter- 49 : Magnetic Resonance Imaging Pulse Sequences : An Evolution

- **Short notes:**

- MRI Sequences in daily practice (2017) (2012)

Chapter- 50 : Digital Radiography : An update

- Describe in detail about computerized radiography system (CR system). Describe its advantages and disadvantages in the field of Radiodiagnosis (2010) (2005) (2003)
- Draw a labelled diagram of Computed radiography System (CR System). Describe its basic principles in short (2008)
- Write in detail of digital radiography including the basic physical principle involved in them (2005)
- What is digital radiography? Describe its indications and advantages over conventional radiography (2005)

- **Short notes:**

- CR system (2015) (2010)
- Digital Radiograph (2012) (2011) (2007) (2005) (2004) (2001) (2000)
- Digital chest radiography (2006)

Chapter- 52 : Fluoroscopy and Digital Subtraction Angiography

- Write in detail of DSA including the basic physical principle involved in them (2005)
- CT fluoroscopy (2005) (1994)

- **Short notes:**

- DSA (2010) (2009) (2007) (2000) (1995) (1992)

Chapter- 54 : Magnetic Resonance Contrast Media

- **Short notes:**

- Gadolinium (2015)
- MR contrast media (2011) (2007) (2006) (2005)

Chapter- 55 : Ultrasound Contrast agents

- **Short notes:**

- Ultrasound contrasts (2012) (2011) (2000) (1999) (1998)

Chapter- 56 : Iodinated Contrast Media : An Update

Chapter- 57 : Contrast Reactions and Its Management

- Classify the commercially available iodinated contrast media according to ionic nature and osmolality (using the name of salt in each case). Also give a classification of contrast media reactions, pathophysiology, identification and management (Table format is preferable) (2011)
- Write in detail about management of adverse reactions to iodinated contrast media (2010)

- **Short notes:**

- Iohexol (2006) (1992)
- Conray (1992)
- Microbar (1992)

Write the chemical nature, use, indications of the following drugs

Chapter- 58 : Picture Archiving and Communication System and Radiology Information System

- **Short notes:**

- Use of Digital Technology in Radiodiagnosis (2006)
- PACS (2002)

Chapter- 60 : Radiation hazards and Radiation Units

Chapter- 61 : Radiation protection

- Describe in brief hazards of ionizing radiation and personal monitoring of radiation workers (2006)

- Discuss the biological effect of radiation and the measures taken against its protection for radiation workers and patients in radio-diagnosis department (2006) (2005) (2002) (1998) (1996)
- Enumerate the various radiation protection devices in a diagnostic radiology department and describe them in detail (2004)
- Describe the physical properties of X-ray. Enumerate and discuss the biological effects of ionizing radiations (2002)
- **Short notes:**
 - Define various radiation units while elaborating their inter convertibility (2012)
 - Principles of radiation protection (2012) (2011) (2003)
 - Maximum permissible dose (2008) for public at large (1993)
 - Personal monitoring of radiation workers (2007)
 - Biological effect of radiation (2002)
 - Personal monitoring services (2001)
 - Radiation hazards and protection (2000)
 - ALARA concept (1995) in radiation protection (1992)

Chapter- 63 : Recent advances in PET/CT and PET/MR

- Imaging by PET in CNS infections (2011)
- Write briefly the indications, contra-indications and advantages of PET (2010)
- Describe the role of PET-CT in Radiodiagnosis (2008)
- **Short notes:**
 - PET CT (2013) (2010) (2007)
 - PET (2007) (2005) (2004) (2003) (2001)

Chapter- 65 : Molecular Imaging

- What do you know about molecular imaging (2010)

Chapter- 67 : Current status of Conventional Techniques and Advances in GI Imaging

- **Short notes:**
 - MR enterography (2015)
 - CT enteroclysis (2011) (2005)

Chapter- 68 : Nontraumatic Acute Trauma

- Role of imaging in acute abdomen (2012) (1999)
- Role of US in acute abdomen (2009) (2000) (1999)
- Role and limitation of US in acute abdomen (2006)

Chapter- 69 : Imaging in Abdominal Trauma

- How will you investigate a case of blunt abdomen (2017) (2010) (2009)
- Role of imaging in acute abdomen (2012) (1996)
- **Short notes:**
 - Enumerate CT findings in blunt trauma abdomen (2012)

Chapter- 70 : Imaging of the Esophagus

- Describe investigation, causes and diagnosis of a case of dysphagia (2008)
- **Short notes:**
 - Achalasia cardia (Cardiospasm) (2013) (2012) (2008) (2007) (2005)
 - Neuromuscular disorders of oesophagus (2009)

Chapter- 71 : Benign Lesions of Stomach and Small Intestine

- Discuss radiological anatomy of stomach and duodenum in detail (1996) [Correlate with Ch. 19 of Sutton's]
- **Short notes:**
 - Gastric ulcer (1995)

Chapter- 73 : Abdominal Tuberculosis

- Describe the role of various imaging modalities in evaluation of intestinal tuberculosis (2015)
- How will you approach a case of Koch's abdomen? (only by radiological means) (2002) (1998)
- Discuss the causes of strictures in the small bowel. What are the radiological findings of tuberculosis of terminal ileum? (1992)
- **Short notes:**
 - Barium meal follow through (BMFT) for abdominal tuberculosis. (2011)
 - Role of Barium study in ileo-caecal tuberculosis (2010)
 - Ileo-caecal tuberculosis (2006)
 - Abdominal TB (2003)
 - USG appearance of Koch's abdomen (1999)

Chapter- 74 : Nontubercular inflammatory bowel disease

- **Short notes:**
 - Role of radiology and imaging in ulcerative colitis (2005)
 - Ulcerative colitis (2000)
 - Crohn's disease (2000)

Chapter- 77 : Imaging of appendix

- **Short notes:**
 - Acute appendicitis (2010) (2006)

Chapter- 78 : Liver Anatomy and Techniques of Imaging

- Describe the segmental anatomy of liver and discuss its clinical significance (2010) (2005)
- Describe the segmental anatomy of liver and discuss focal hypoechoic lesions of liver (2008)
- **Short notes:**
 - Discuss the techniques of triple phase CT examination of Liver (2012)
 - Segmental liver anatomy & its clinical significance (2012)

Chapter- 79 : Benign Focal lesions of the Liver

Chapter- 80 : Malignant Focal lesions of the Liver

- Describe imaging features of various liver tumors on CT (2012)
- Role of Scintigraphy in focal lesion of liver (2005)
- Write an essay on Cystic lesions of Liver (2000)

Chapter- 82 : Imaging of Obstructive Biliopathy

- Enumerate causes of obstructive jaundice and discuss various imaging modalities of investigating them (2008) (2007) (2000) the role of radiologists In its management (2002)
- Discuss radiological anatomy of Gall bladder and bile duct. Discuss various methods to investigate the organ (2005)
- Describe PTC (Percutaneous Transhepatic Cholangiography) in detail (2000)
- **Short notes:**
 - Percutaneous biliary drainage (2017)
 - Imaging in Klatskin tumor (2015)
 - Interventional radiology in obstructive jaundice (2007)

Chapter- 84 : Imaging and Interventions in Pancreatitis

- Give a detailed description of radiology and imaging of acute pancreatitis (2013) (2009) (2005)
- Discuss the radiological features of various types of pseudopancreatic cysts, Briefly outline the role of interventional radiology in its diagnosis & management (2000)
- How will you approach a case of chronic pancreatitis (1994)
- Discuss the cause of pancreatic calcification (1993)
- **Short notes:**
 - Enumerate CT findings in acute pancreatitis (2012)
 - Enumerate MDCT findings in acute pancreatitis (2010)
 - US vs CT in pancreatitis (2007) (2005)
 - MPD (2005) (2000) (1998) (1996)

Chapter- 85 : Tumors of Pancreas

- Tumors of the tail of pancreas (2012)
- Imaging of pancreatic masses (2000)
- Cancer head of pancreas (1995) (1993)

Chapter- 86 : Imaging in portal hypertension

- **Short notes:**
 - Portal hypertension (2017) (2015)

Chapter- 87 : Hepatic venous outflow tract obstruction

- Discuss the cause, imaging finding of Budd chiari syndrome (BCS) & radiological management (2017)
- **Short notes:**
 - Hepatic venous outflow obstruction imaging (2012)

Chapter- 90 : Interventional Treatment of Liver Tumors

- **Short notes:**
 - RF ablation of liver tumor (2012)

Chapter- 92 : Interventional Radiology in portal hypertension

- Discuss the role of interventional radiology in diseases of hepatobiliary systems (1997) [Correlate with Ch. 90 of AIIMS-MAMC-PGI's]
- **Short notes:**
 - Interventions in Portal Hypertension (2013)

Chapter- 93 : Current status of Conventional techniques in Urogenital Imaging

Chapter- 94 : Ultrasound of Urogenital Tract: Techniques and Normal Appearances

Chapter- 95 : Computed Tomography of Urogenital Tract: Techniques and Normal Appearances

Chapter- 96 : MRI of Urogenital Tract : Techniques and Normal Appearances

Chapter- 97 : Current Status of Nuclear Medicine in Urinary Tract Imaging

- Describe the role of recent diagnostic Imaging modalities in renal diseases (2001)
- **Short notes:**
 - Virtual endoscopy (2011) (2007) (2005)

Chapter- 98 : Current Status of Urographic Contrast Media

- **Short notes:**
 - Contrast induced nephropathy (2011)

Chapter- 99 : Tubercular infection of Urinary Tract

- Pathophysiology and imaging in Renal Tuberculosis (2005)

- **Short notes:**
 - Renal tuberculosis (2013) (2000)
 - Intravenous Urographic features of renal tuberculosis, according to phase of disease (2011)

Chapter- 102 : Pathology of Gynecological malignancies

- Ovarian tumors in a 55 years old post-menopausal woman (2012)
- Ovarian masses in a young female (2011)

Chapter- 103 : Imaging in Renal Tumors

- Describe how will you proceed to investigate painless hematuria in a 65 years old male, all imaging modalities available (2010) (2005) (2004) (1999) (1995)
- How will you investigate a case of Renal mass (2007) (1998)
- Discuss the role of different imaging modalities in the diagnosis of renal masses (2004)
- Discuss the recent advances in the diagnosis of renal lump with special reference to US, CT & MRI (2002)

Chapter- 107 : Renovascular hypertension

- Describe the etiopathogenesis of Renovascular hypertension. How will you proceed to investigate such a case (2017) (2002) (2000)
- Imaging approach in suspected renal artery stenosis (2015)
- Describe in brief various imaging methods of Renovascular hypertension (2012) (2005)
- How will you radiologically evaluate a young hypertensive and enumerate the various causes of renal artery stenosis and their treatment (2009)
- What is color doppler ultrasonography. Describe its role in renal artery stenosis (2005)
- Discuss the cause of unilateral small kidney. How would you investigate a case of renal artery stenosis (1993)

Chapter- 108 : Renal Parenchymal Disease and Renal Failure

- Enumerate causes of chronic renal failure and discuss various radiological diagnostic modalities for its investigation (2006)
- **Short notes:**
 - Unilateral contracted kidney (1992)

Chapter- 109 : Imaging of Scrotum

- **Short notes:**
 - Acute scrotum/ Painful scrotum (2017) (2012)

Chapter- 111 : Urinary Tract Trauma

- Describe the role of imaging in Renal trauma (2009)

Chapter- 113 : Retroperitoneum

- Imaging findings in retroperitoneal fibrosis (2010)
- **Short notes:**
 - Retroperitoneal fibrosis (2017)

Chapter- 116 : Imaging in Female Infertility

- Write an essay on female infertility (2006)
- **Short notes:**
 - Imaging in Infertility (2012) (2009)
 - HSG (2011) (2010) (2007)
 - Hysterosalpinogram in evaluation of patients with secondary infertility
 - Role of doppler in infertility (1999)

Chapter- 120 : Male Infertility and Erectile Dysfunction

- **Short notes:**
 - Peyronie's disease (2006)

Chapter- 123 : Interventions in children

- **Short notes:**
 - Interventional angioplasty (1999)
 - Intraarterial embolization (1998)

Chapter- 125 : Neonatal respiratory distress

- **Short notes:**
 - Acute respiratory distress in neonate (2009) (2008)

Chapter- 129 : Developmental Anomalies of Gastrointestinal Tract

- Discuss the development of gut and describe the radiological finding in congenital lesions of the bowel (2013)
- **Short notes:**
 - Congenital esophageal anomalies (2008)
 - Hirschsprung's disease (2008) (2002) (2000)

Chapter- 130 : Imaging of anorectal anomalies

- **Short notes:**
 - Anorectal anomalies (2005)

Chapter- 132 : Hepatic and pancreatic masses in Children

- **Short notes:**
 - Pseudopancreatic cyst (2007) [Correlate with Ch. 26 of Sutton]

Chapter- 134 : Congenital Anomalies of Urinary Tract

- Discuss the development of kidneys and discuss the imaging finding in congenital renal anomalies (2011)
- Discuss the development of kidneys and discuss cystic lesions of kidney (2010)
- **Short notes:**
 - Ureterocele (2002)

Chapter- 135 : Urinary Tract Infections

- **Short notes:**
 - Vesico ureteric reflux (VUR) (2010) (2007) (1999)

Chapter- 136 : Renal and Retroperitoneal Masses

- Enumerate Renal neoplasm in children. Write imaging feature of any three (2011)
- Mesenteric lymphadenopathy in children (2009)
- Describe various causes and imaging methods of renal masses in paediatric age group (2002)
- DD of pediatric renal mass (2000)
- Describe in brief imaging methods and various causes of abdominal masses in children below the age of 5 years (1998) [Correlate with Ch. 28 of Sutton's]
- What are radiographic appearances of Wilm's tumor. What is the role of US and CT in its evaluation (1996)
- **Short notes:**
 - Wilm's tumor (2008)

- Neuroblastoma (2000)

Chapter- 142 : Imaging of Pediatric Hip

- **Short notes:**
 - USG in DDH (2013)
 - Developmental dysplasia hip (DDH) (2013)
 - Radiological features of congenital dislocation of hip (2006)

Chapter- 145 : Congenital Brain Anomalies

- **Short notes:**
 - Neurofibromatosis (2012)

Chapter- 151 : Chest X-Ray : Techniques and Anatomy

- Draw a labelled diagram of Bronchopulmonary segments and describe the technique of Bronchography (2002) (1992) Discuss diagnostic significance of bronchopulmonary segments (1994)
- **Short notes:**
 - Enumerate broncho-pulmonary segments (2007)

Chapter- 152 : Multidetector Computed Tomography of Chest : Techniques and Anatomy

- Discuss radiological anatomy of bronchial tree (2012)
- Discuss in detail the CT anatomy of lung and mediastinum (2011)
- Discuss radiological anatomy of tracheobronchial tree and imaging in bronchiectasis (2005)
- Discuss HRCT protocols in lungs and indication of HRCT in lungs (2003) (1999)
- **Short notes:**
 - Enumerate MDCT findings in Bronchiectasis (2010)
 - HRCT in lung (2007) (2006) (2005)

Chapter- 153 : Basic patterns of Lung diseases

- Types of emphysema and their radiological differentiation (2010)

Chapter- 155 : Nontubercular Pulmonary infections

- **Short notes:**
 - Imaging in H1N1 Influenza (2015)
 - Pulmonary hydatidosis (2000) (1999)

Chapter- 157 : Imaging of Interstitial lung disease

- **Short notes:**
 - Pneumoconiosis (2006)

Chapter- 160 : Imaging the Mediastinum

- Describe the anatomy of mediastinum. Give CT findings of mass in anterior mediastinum masses (2013)
- Mediastinal imaging with possible d/d (2011)
- Discuss the role of computed tomography (CT) in mediastinal masses (2010) (2005)
- Classify mediastinal masses and describe radiological investigations (2006)
- Describe radiological anatomy of Mediastinum and discuss the site of different lesions (2005)
- What are the causes of mediastinal widening? Discuss the radiological findings of aneurysm of aorta (1992)
- **Short notes:**
 - Cystic mediastinal lesions (2012)
 - Posterior mediastinal lesions on plain X-rays, CT and MRI (2005)

Chapter- 161 : Imaging of Solitary and Multiple Pulmonary Nodules

- Discuss the D/D of Solitary Pulmonary Nodule (2010) (2008) (2006)
- Describe the radiological evaluation of solitary pulmonary nodules (2007)
- **Short notes:**
 - Solitary pulmonary nodule (2013)

Chapter- 162 : Lung Malignancies

- Discuss imaging approach in Bronchogenic carcinoma (2012) (2006)
- Write an essay on Tumor of lung (2009)
- Briefly describe the radiological features of Alveolar cell carcinoma (2000)
- **Short notes:**
 - Bronchogenic carcinoma (2000)
 - Pancoast tumor (1999)

Chapter- 166 : Imaging of Pleura

- **Short notes:**
 - Pleural mesothelioma (1992)

Chapter- 167 : Imaging of the Diaphragm and Chest Wall

- **Short notes:**
 - Use of CT in evaluation of chest wall pathology (2003)

Chapter- 168 : Bronchial Artery Embolization

- Bronchial embolization (2012)
- Enumerate the causes of hemoptysis and various imaging finding with differential diagnosis (2011)

Chapter- 170 : Chest X-Ray Evaluation in Cardiac disease

- Describe the plain film findings of mitral valve disease with special emphasis on lung field findings (2013) (Correlate with Ch. 11 of Sutton's) How will you differentiate radiologically mitral stenosis from mitral regurgitation (1999)
- **Short notes:**
 - Wedge pressure (2008)
 - Radiological features of mitral valve disease (2006)
 - Plain film diagnosis of common cardiac anomalies (2003)
 - Mitral valve lesion (1998)

Chapter- 171 : Imaging in Ischemic Heart Disease

- MDCT (2013) (2011) (2009)
- Coronary angiography (2011)
- **Short notes:**
 - Principle of MDCT and its advantages (2011)
 - CT coronary angiography (2010)

Chapter- 172 : Imaging Approach in Children with Congenital Heart Disease

- **Short notes:**
 - Tetralogy of Fallot (2007) (2006) (1996)
 - Left to right shunt (2004)
 - Radiological findings of Atrial Septal Defect (ASD) (1999)

Chapter- 173 : Imaging in Cardiomyopathies

- Write an essay on Cardiomyopathy (2010)
- **Short notes:**
 - Cardiomyopathy (2013) (2010)
 - Imaging in Arrhythmogenic Right Ventricular Dysplasia (ARVD) (2012)

Chapter- 175 : Imaging Diagnosis of Valvular Heart Disease

- Cardiac MRI (2009)
- Describe in detail the plain X-Ray film finding of mitral stenosis with special reference to left atrial enlargement (2006) [Correlate with Ch. 11 of Sutton]

Chapter- 176 : Imaging of Pericardium

- **Short notes:**
 - Briefly describe the radiological features of Pericardial effusion (2000)

Chapter- 178 : Imaging of Aorta

- Discuss the radiological methods for evaluation of aorta and great vessels and its various pathologies (2010)

Chapter- 185 : Nontubercular Bone and Joint Infections

- Role of nuclear medicine and MR imaging in acute osteomyelitis (2005)
- **Short notes:**
 - Chronic osteomyelitis (2007)

Chapter- 190 : Skeletal Disorders of Metabolic and Endocrine Origin

- **Short notes:**
 - Brown tumor (2008) [Correlate with Ch. 14 of Yochum's]
 - Renal osteodystrophy (2008)

Chapter- 194 : Magnetic Resonance Imaging of the Knee

- Describe role of MRI in knee joint lesions (2012)
- **Short notes:**
 - Meniscal injury (2012)
 - Radiological anatomy of knee joint and MR scanning of knee joint (2005)

Chapter- 195 : Magnetic Resonance Imaging of Hip and Pelvis

- **Short notes:**
 - Avascular necrosis of hip (2013)

Chapter- 200 : A Systematic Approach to Imaging of Breast Lesions

- Write an essay on imaging of breast pathologies (2011)
- Computer aided diagnosis in breast (2011)
- Classify the breast masses and discuss the radiological findings in detail on mammography (2010)
- Give a brief account of mammographic anatomy of normal breast. Discuss the diagnostic significance of various types of calcifications seen in breast. How will you differentiate a benign lesion from a malignant lesion of breast by mammography (1999)
- Describe various causes and imaging methods of breast lump in females (1998)
- Give a detailed account of current techniques in use for breast imaging. Discuss the indication of each method of examination. (1993) (1992)
- **Short notes:**
 - BIRAD in breast lesions (2017) (2012) (2011)

- MR breast (2013)
- Sono-mammography (2011)
- Sonomammography vs Mammography (2007) (2006) (2005)
- Mammography (2006) (2005) (1998) (1997) (1993) (1992)
- Breast carcinoma (2003)
- Dedicated mammogram (2001)
- Imaging features of Ca Breast (2000)
- Role of 3-D MRI in Ca Breast (1999)

Rumack's Diagnostic Ultrasound

Chapter- 01 : Physics of Ultrasound

- What is Ultrasound? Describe in brief the construction of a phased array and a linear array scanner used in real time ultrasonography. (2005)
- What is Doppler's principle? How it is used in color-doppler flow imaging? (2005)
- Describe in brief the transducers used in USG (2003) [Correlate with Ch. 38 of AIIMS-MAMC-PGI's]
- Describe the basic principles of ultrasonography. Discuss its use in obstetrics and gynae (1992)
- **Short notes:**
 - Color Doppler artifacts (2017)
 - Ultrasound artifacts (2015) (1999) [Correlate with Ch. 38 of AIIMS-MAMC-PGI's]
 - HIFU (High Intensity Focused Ultrasound) (2011)
 - Basic principles of USG and Color Doppler (2010) (2007) (2004)
 - Piezoelectric effect (2008) (1999) (1992)
 - Tissue harmonic imaging (2006) (2004) (2002) (2001) Pulse Inversion Harmonic Imaging (2008)
 - Doppler angle (2004)
 - Application of pulsed and continuous doppler ultrasound (2003)
 - Duplex Color doppler (2001)
 - Doppler effect (2000)
 - Intraoperative ultrasound (1999) [Correlate with Ch. 38 of AIIMS-MAMC-PGI's]
 - Color doppler (1996)
 - Doppler shift effect (1994)

Chapter- 02 : Biological effects and safety

- **Short notes:**
 - Harmful effects of ultrasound (2003)

Chapter- 04 : The Liver

- Describe ultrasonographic anatomy of liver segments and describe the role of interventional radiology in hepato-biliary system (2007) [Correlate with Ch. 89, 90 and 92 of AIIMS-MAMC-PGI's]
- Describe sonological anatomy of liver. Discuss sonological findings of hydatid liver (2004)
- D/D of an echoic mass in liver as seen on ultrasonography (1992)
- **Short notes:**
 - Doppler in Budd Chiari syndrome (2005)
 - Role of USG in amoebic liver abscess (2000)
 - USG appearance of Liver abscess (1996)

Chapter- 07 : The Pancreas

- **Short notes:**
 - Sonomorphology pancreas (2005)
 - Role of ultrasound in pancreatic diseases (1999)

Chapter- 09 : The Kidney and Urinary tract

- Describe in detail the role of Color Doppler in renal pathology (2006) (2002)
- **Short notes:**
 - USG findings in Polycystic disease of Kidney (2008)
 - Sonourethrography (2005)

Chapter- 10 : The Prostate

- Discuss the role of USG in prostatic diseases (2000)

Chapter- 15 : Gynecology

- Enumerate and classify various congenital anomalies of the uterus. Discuss the role of US & MRI in their diagnosis, highlighting their advantages & limitations (2015)
- Role of ultrasound in monitoring follicular development (1995)
- **Short notes:**
 - Molar pregnancy (2015) (2012) (2000)
 - Doppler evaluation of Ovarian masses (2009)
 - US monitoring of ovarian functions (1998)

Chapter- 18 : The Thyroid gland

- Describe the various thyroid lesions on USG (2011)

Chapter- 20 : The Breast

- Role of USG in benign & malignant breast diseases (2017) (2000) [Correlate with Ch. 200 of AIIMS-MAMC-PGI's]
- **Short notes:**
 - Sonography in malignant lesions of breast (1997)

Chapter- 21 : The Scrotum

- **Short notes:**
 - Varicocele (2017)
 - TRUS (2011)
 - Role of color doppler in Testicular tumors (1998)

Chapter- 22 : The Rotator Cuff

- **Short notes:**
 - USG in shoulder (2013) (2011)

Chapter- 23 : The tendons

- **Short notes:**
 - HR sonography of acute knee joint (2009)

Chapter- 25 : The Extracranial Cerebral Vessels

- **Short notes:**
 - Carotid doppler (2011)

Chapter- 26 : The Peripheral Arteries

Chapter- 27 : The Peripheral Veins

- Discuss the role of color doppler in lower extremity vascular disease (2006)
- **Short notes:**
 - Lower limb arterial color doppler (2006)
 - Color doppler in DVT (2002)

Chapter- 28 : Overview of Obstetric Imaging

- Role of ultrasonography in congenital abnormalities of fetus (1994)
- **Short notes:**
 - Imaging in 2nd Trimester of Pregnancy (2008)
 - Imaging in 3rd Trimester of Pregnancy (1992)

Chapter- 30 : The First Trimester

- Role of ultrasound in 1st trimester pregnancy (2015) (2002) (1992)
- **Short notes:**
 - Yolk sac criteria for pregnancy outcome (2010)
 - Ectopic pregnancy (2010) (2000)
 - Role of ultrasound in bleeding 1st trimester of pregnancy (2009)
 - TAS v/s TVS in the first trimester of pregnancy (2005)
 - Sonographic features of abnormal gestational sac (1999)
 - USG appearance of decidual changes in early intrauterine pregnancy (1999)
 - TVS v/s TAS (1996) (1995) [Correlate with Ch. 15 of Rumack's]

Chapter- 31 : Chromosomal abnormalities

- **Short notes:**
 - Down's syndrome (1992)

Chapter- 32 : Multiple pregnancy

- **Short notes:**
 - Twin peak sign (1998)

Chapter- 34 : The Fetal Brain

- Draw labelled diagram of ventricular system of brain. Discuss the role of ultrasound examination in congenital lesions of brain in fetus (1997)

Chapter- 35 : The Fetal Spine

- **Short notes:**
 - Neural tube defects (1998)

Chapter- 38 : The Fetal Abdominal Wall and Gastrointestinal Tract

- **Short notes:**
 - Anterior abdominal wall defects in fetus (2006)

Chapter- 41 : Fetal hydrops

- **Short notes:**
 - Hydrops foetalis (2007) (2006)

Chapter- 43 : Fetal Surveillance: Doppler assessment of Pregnancy and Biophysical Profile

- Describe role of color doppler in high risk pregnancy (2007)
- **Short notes:**
 - MCA in Rh incompatibility & IUGR (2017)
 - Biophysical score (2015)
 - Brain sparing effect (2011)
 - Role of Doppler in IUGR (2011) (2010) (2008) (2005) (2000)
 - Doppler evaluation for utero-placental and feto-placental insufficiency (2010)
 - IUGR (2007) (2006) (2002)

- Color doppler in 2nd trimester of pregnancy

Chapter- 44 : Sonographic Evaluation of Placenta

- **Short notes:**
 - USG appearance of placental maturation changes (1996)

Chapter- 47 : Neonatal and Infant Brain Imaging

Chapter- 48 : Doppler Sonography of the Neonatal and Infant Brain

Chapter- 49 : Doppler Sonography of the Brain in Children

- **Short notes:**
 - Cranial sonography (2017) (2007) (2002) (2000)
 - Sonographic appearance of Neurosonography in infants (1996)

Chapter- 53 : The pediatric liver and spleen

- Describe the anatomy of portal circulation. Discuss the role of US in diagnosis of portal hypertension (2003)
- **Short notes:**
 - Role of doppler in portal hypertension (2005)

Sutton's textbook of Radiology and Imaging

Chapter- 01 : The normal chest: methods of investigation and differential diagnosis

- Discuss differential diagnosis of a coin shadow in the lungs. How will you arrive at correct diagnosis? (2000)
- Describe the anatomy of diaphragm. Enumerate & describe various types of diaphragmatic hernia. Discuss hiatus hernia (2000) (1992)
- **Short notes:**
 - Kerley B lines (2008), Kerley lines (2005)
 - Eventration (2007)
 - Rib notching (2005)
 - Uses of expiratory chest film (2005)
 - Coin shadow (1999)
 - Hiatus hernia (1998) (1995)

Chapter- 06 : Diseases of the airway : Collapse and consolidation

- **Short notes:**
 - MacLeod syndrome (Swyer-James syndrome) (2010)

Chapter- 09 : The Paediatric Chest

- **Short notes:**
 - Scimitar syndrome (2007)

Chapter- 10 : The normal heart : Anatomy and techniques of examination

- **Short notes:**
 - Cardiac and coronary anatomy (2012)

Chapter- 11 : Acquired heart disease I : the chest radiograph

- **Short notes:**
 - Pathophysiology of pulmonary edema (2005)

Chapter- 14 : Congenital heart disease

- **Short notes:**
 - Congenital anomalies of coronary arteries (2012)
 - Truncus arteriosus (2005)
 - Ebstein's anomaly (2005)

Chapter- 15 : Arteriography and interventional angiography

- **Short notes:**
 - C.T. Angiography (2010) (2006) (2002) (1999)
 - 3 D CT Angiography (1999)

Chapter- 16 : Phlebography

- **Short notes:**
 - Renal vein thrombosis (2002)

Chapter- 18 : The salivary glands, pharynx and oesophagus

- **Short notes:**
 - Oesophageal varices (2015)

Chapter- 20 : The small bowel and peritoneal cavity

- Describe in brief the technique, indication, advantages and disadvantages of "small bowel enema" (1992)
- **Short notes:**
 - Small Bowel enema (Enteroclysis) (2017) (2009) (2006) (2000)

Chapter- 21 : The large bowel

- **Short notes:**
 - Barium enema (2008)

Chapter- 22 : The acute abdomen

- Describe the differential diagnosis and investigation in a case of lump in Right Iliac fossa (2007)
- Discuss differential diagnosis and role of high resolution sonography in right iliac fossa mass (2007)
- Discuss the role of Ultrasound in acute abdomen (2006) (2001)
- **Short notes:**
 - Chilaiditi syndrome (2009) (2004)
 - Intussusception (2004) (2000) (1999)

Chapter- 24 : The Biliary tract

- **Short notes:**
 - Mercedes Benz sign (2015)
 - Xanthogranulomatous cholecystitis (2012)
 - Choledocho-duodenal fistula (2004)

Chapter- 26 : The Pancreas

- **Short notes:**
 - MRCP (2008) (2007) (2006) (2002) (1994)
 - ERCP (2008) (2007) (1999) (1992)
 - Clinical application of MRCP (2000)
 - Annular pancreas (1999)

Chapter- 29 : The urogenital tract : anatomy and investigations

- Retro peritoneal spaces and their importance in imaging (2011)

- Technique and interpretation of Micturating Cysto-urethrogram (MCU) in stress incontinence (2011) [Correlate with Ch. 104 of AIIMS-MAMC-PGI's]
- Radiographic anatomy of kidney (2006)
- **Short notes:**
 - Cysto-urethrography (2010)
 - Micturating Cysto-urethrogram (MCU) (2006)

Chapter- 30 : The Kidneys and ureters

- Classify cystic renal diseases. Discuss their radiological appearances both on conventional techniques and ultrasound imaging (2000) [Correlate with Ch. 9 of Rumack's]
- **Short notes:**
 - Polycystic kidney (2000) (1998)

Chapter- 34 : Gynaecological Imaging

- Enumerate and classify various congenital anomalies of the uterus. Discuss the role of US & MRI in their diagnosis, highlighting their advantages & limitations (2015)

Chapter- 37 : Avascular necrosis: osteochondritis; miscellaneous bone lesions

- **Short notes:**
 - Osteochondritis (2017)
 - Dactylosis spontanea (Ainhum) (1992)

Chapter- 47 : The Pharynx and Larynx : The Neck

- Describe the imaging features of juvenile nasopharyngeal angiofibroma. Discuss the role of radiological interventions in its management. (2015)

Chapter- 50 : Ultrasound of the eye and orbit

Chapter- 51 : The orbit

- **Short notes:**
 - Imaging characteristics of Retinoblastoma (2006)

Chapter- 53 : The skull

- **Short notes:**
 - Skull metastasis (2015)

Chapter- 54 : Neuroradiology of the spine

- Describe in brief various spinal pathologies and role of MRI in spinal tumors (2011) (2009) [Correlate with Ch. 33 of AIIMS-MAMC-PGI's]
- Discuss the role of various radiological and imaging methods in the evaluation of spinal lesions (2003)
- Discuss the technique of contrast myelography and how will you differentiate extradural, intradural, and extramedullary lesions of spinal cord (2000)
- Role of MRI in spinal lesions (1999)
- **Short notes:**
 - Tuberculous spine (2006)
 - Myelography (2002) CT myelography (1995) (1994)
 - Epidurography (2000)

Chapter- 56 : Interventional Neuroradiology

- Discuss various interventional procedures in neuro-radiology (2008)
- **Short notes:**
 - Vertebroplasty (2010)

Chapter- 59 : Recent technical advances

- **Short notes:**
 - Echo enhancing agents (2012) (2006) (2005) [Correlate with Ch. 3 of Rumack's]

Osborn's Brain : Imaging, Pathology and Anatomy

Chapter- 08 : Arterial Anatomy and Strokes

- Give a brief account of arterial supply of brain (2015) Support it with labelled diagrams (2000)
- **Short notes:**
 - Circle of Willis (2006)
 - Role of MRI in CVA (2006)

Chapter- 10 : Vasculopathies

- **Short notes:**
 - Subclavian steal phenomenon (2002)

Chapter- 21 : Embryonal and neuroblastic tumors

- **Short notes:**
 - Esthesio Neuroblastoma (2006)

Chapter- 23 : Cranial Nerves and Nerve Sheath Tumors

- **Short notes:**
 - Acoustic neuroma (2015) (1996)
 - Glomus tumor (1992)

Chapter- 25 : Sellar Neoplasms and Tumor-like Lesions

- **Short notes:**
 - Empty sella (1996) [Correlate with Ch. 18 of AIIMS-MAMC-PGI's]

Chapter- 31 : Inherited Metabolic Disorders

- Describe radiological findings in Hurler's disease (1999) (1995)

Chapter- 34 : Hydrocephalus and CSF disorders

- Write an essay on hydrocephalus and its investigations (2007)
- Write an essay on CSF pathway and hydrocephalus (2006)
- Where is the CSF formed and what are its functions? Describe the pathways of CSF circulation with illustration (2006) Enumerate the names of investigations done for it (1992)
- Discuss physiology of CSF pathway and discuss role of ventriculography (2005) (1993)
- How will you investigate a case of raised intracranial tension (ICT) (2004)

Chapter- 36 : Posterior fossa malformations

- **Short notes:**
 - Dandy Walker spectrum (2017)
 - Joubert syndrome (2010)
 - Arnold Chiari malformations (2008)
 - Arnold Chiari malformations type-I (2002)

Chapter- 37 : Commissural and Cortical Maldevelopment

- **Short notes:**
 - Migrational anomaly (2015)
 - Imaging findings in sulcation and migration defects of brain (2010)

Chapter- 38 : Holoprosencephalies, Related Disorders and Mimics

- **Short notes:**
 - Holoprosencephaly (2005)

Chapter- 39 : Neurocutaneous syndromes

- **Short notes:**
 - Tuberous sclerosis (2000)

Chapter- 40 : Vascular Phacomatoses

- Write an essay on Phacomatoses (1998)
- **Short notes:**
 - Sturge weber syndrome (2002)

Yochum's : Essentials of Skeletal Radiology

Chapter- 01 : Normal Skeletal Anatomy and Radiographic Positioning

- Describe the following radiographic technique :
 - a) Axial view of shoulder joint (2006)
 - b) Swimmer view for cervico-dorsal spine (2006)
 - c) Apicogram of chest (2006)
 - d) Towne's view (2005)
 - e) Schuller's view (2005)
 - f) Trans axial view of Patellar bone (2005)
 - g) Scaphoid bone (2005)
 - h) Sternum bone (2005)
 - i) Lateral decubitus film (2005)
 - j) Skyline view patella (2002) (1993)
 - k) Optic foramina (2000) (1992)
 - l) Stenver's view (2000)
 - m) True lateral view of neck of femur (2000)
 - n) Water's view (1998)
 - o) Lateral view of 1st dorsal vertebra (1995)
 - p) Temporomandibular joint (1995)
 - q) Mastoid (1995)
 - r) Right SI joint AP view (1994)

Chapter- 02 : Measurement in skeletal radiology

- **Short notes:**
 - Prevertebral soft tissue (1995)

Chapter- 03 : Congenital Anomalies and normal skeletal variants

- Discuss the role of various radiological imaging methods in the evaluation of cranio-vertebral junction anomalies (2005) (2004) (2000) [Correlate with Ch. 28 of AIIMS-MAMC-PGI's]
- **Short notes:**
 - Klippel-feil disease (2013)
 - Diastematomyelia (2010)
 - Basilar Invagination (Impression) (2005)

- Developmental anomalies of cervical spine (2000)
- Diastematomyelia (1999)
- Occipito-atlanto-axial deformities (1999)
- Platybasia (1998)
- Madelung's deformity (1992)

Chapter- 06 : Diagnostic Imaging of the Musculoskeletal System

- Radioisotope uptake studies in diagnosis (2012)
- What are radioisotopes and radiopharmaceuticals. Briefly mention properties of radiopharmaceuticals suitable for diagnostic use. Give a brief account of $^{113}\text{In}^m$ (2004)
- **Short notes:**
 - Isotopes used in diagnostic radiology (2011)
 - Isotope bone scan (2005)

Chapter- 07 : Principles of Radiologic Interpretations

- Discuss differential diagnosis of lytic lesions in long bones (2004)
- **Short notes:**
 - Xeroradiography (2006) (2003) (2002)
 - Diaphyseal lesions of bone and their diagnostic work up (2005)

Chapter- 08 : Skeletal dysplasias

- **Short notes:**
 - Marfan's syndrome (2017) (2013)
 - Osteopetrosis (2011) (2005)
 - Osteogenesis imperfecta (2008) (2000) (1996)
 - Myositis ossificans progressiva (or Fibrodysplasia ossificans progressiva) (2006)
 - Pyknodysostosis (2006) (2002)
 - Pseudo-achondroplasia (2002)
 - Cretinism (1998)

Chapter- 09 : Trauma

- **Short notes:**
 - Growing fracture (2009) (2001)

Chapter- 10 : Arthritic Disorders

- **Short notes:**
 - Gout (2000) (1999)
 - Rheumatoid arthritis (1995)

Chapter- 11 : Tumors and Tumor-like processes

- Discuss the differential for sclerotic lesion of bone and describe briefly the radiological findings in Paget's disease (2013)
- Epiphyseal tumors of the lower end of femur in a young boy (2012)
- Classify bone tumors. What are the radiological features of primary malignant bone tumors (2011)
- Classify the bone tumor and discuss the radiological imaging findings of any *four* malignant bone tumors. (2005)
- **Short notes:**
 - Giant cell tumor (GCT) (2017)
 - Osteosarcoma (2015) (2010) (2004) (1992) (Correlate with Ch. 39 of Sutton's)
 - Aneurysmal bone cyst (2013) (2008)
 - Osteochondroma (2013)

- Skeletal changes in lymphoma (2010)
- Fibrous dysplasia (2009) (2006)
- Osteoid osteoma (2006) (2000)
- Enchondroma (2005)

Chapter- 13 : Hematologic and Vascular disorders

- **Short notes:**
 - Legg-calve Perthe's disease (2013)
 - Thalassemia (2005)

Chapter- 14 : Nutritional, Metabolic and Endocrine Disorders

- Skeletal features of hyperparathyroidism and differential diagnosis (2012)
- **Short notes:**
 - Secondary hyperparathyroidism (2012)
 - Hyperparathyroidism (2009) (2005) (1999)
 - Acromegaly (2006)
 - Histiocytosis-X (2005)
 - Osteoclastoma (Brown tumor) (1992)
 - Fluorosis (1992)

Grainger & Allison's Diagnostic Radiology

Chapter- 02 : Intravascular Contrast Media for Radiography, CT, MRI and Ultrasound

- Discuss various contrast media used in Radiodiagnosis (2013) (2010) (2004) Radiographic contrast materials (2006)
- **Short notes:**
 - Iodine Sensitivity (2015)
 - Non-ionic contrast media (2010) (2000)
 - Gastrograffin (1992)
 - Omnipagne (non ionic monomer) (1993)
 - Isovist (2001)

Chapter- 06 : Radionuclide and Hybrid Imaging

- Hybrid imaging (2011)

Physics for FRCR Vol-1

Chapter- 01 : Basic radiation physics

Chapter- 03 : Imaging with X-rays

- What is Primary and Secondary radiation? What is Compton Effect and how it is related with scattering of radiation? How these radiations affect the patient and radiograph and what are the measures taken to prevent these effects? (2011) (2005)
- Draw labelled diagram of rotating anode X-Ray. Describe the properties of X-Ray (2000)
- What do you mean by rectification of current? Discuss the various methods of rectification (1995)
- **Short notes:**
 - Heel effect (2013) (2006) (2001)
 - Grid (2009) (2006) (2005) (2000) (1998) Pseudo focused Grid (1992)
 - K. edge effect (2008)
 - Luminescence (2007)
 - Scattering of radiations (2006) (2005) causes & controls (1997) (1994)

- Filters (2006) (2005) used in radiodiagnostic works (1992)
- Inverse square law (2005) (2000)
- Focal spot (2005)
- Rectification (2005) (1994)
- Production of X-ray (2000)
- Characteristic radiation (1995)
- Rotating anode of X-ray tube (1993)
- HVL (Half value layer) (1993)
- Exponential attenuation (1992)

Chapter- 02 : Radiation Hazards & Protection

- **Short notes:**

- TLD (Thermo-Luminescent Dosimeter) badge (2006) (2005) (2002) (2001) (2000)

Chapter- 04 : Films & Screens

- Describe factors affecting quality & quantity of X-ray beam (1994)
- Mention briefly the factors responsible for blurring of an X-ray image and poor contrast. What precautions you will take to avoid these (1993)
- Enumerate various applications of fluorescence in Diagnostic radiology. Draw a labelled diagram showing structure of intensifying screens. Also mention their types and advantages (2005) (2004)
- Structure of double coated film and its advantages over single coated film (2005)
- Discuss various methods used in improving the radiographic contrast (2002)
- What are the constituents of developer? Describe their functions. (2002) Effect of developer on X-ray film during processing (1992)
- Describe in detail the factors which influence the density and contrast of radiographic image (2001) How will you improve the contrast of radiograph (1999)
- **Short notes:**
 - What are the factors and techniques used to improve radiographic quality (2012)
 - Duplitised film (2007)
 - Intensifying screen (2006) (2005) (2002) (2000) (1998) (1993) lead intensifying screen (1992)
 - Developer (2005) (2000) P – Q developer (1999) (1998) (1993)
 - Characteristic curve of X-ray films (2002) (1995) (1992)
 - Macroradiography (2002) (1995) Magnification radiography (1996)
 - Rare earth screens (1999) (1998) (1995) (1994) (1993) (1992)
 - Factors affecting radiographic image (1997)
 - Blurring of image (1994)
 - Reciprocity law (1992)
 - Screen mottle (1992)

Physics for FRCR Vol-2

Chapter- 05 : Digital Radiography

- Describe briefly principles and technique of autoprocessing of X-ray films. What are the differences between the developer solution used for manual and autoprocessing? (1992)

Chapter- 06 : Fluoroscopy

- Describe image intensifier with the help of diagram and its utility in fluoroscopic examination (2006) Discuss the advantages of an image intensifier
- Define fluorescence and phosphorescence. Give a brief account of application of fluorescence in diagnostic radiology (2005)
- Describe in detail the structure and functioning of intensifying and fluorescent screens (2004)

- **Short notes:**
 - Image intensifier (2007) (1999) (1996)

Chapter- 07 : Computed Tomography

- **Short notes:**
 - Partial volume effect (2006)

Chapter- 08 : Gamma Imaging

- What are radio-isotopes? Mention in detail their application in diagnostic imaging (2003) (2001)
- **Short notes:**
 - Radioindium (2006) (2005)
 - ^{99m}Tc (2006) (2005) (2000) (1999) (1994) (1993)
 - Half life in various isotopes used in Radiology practice (2002)
 - Radioactivity (1998)
 - Decay constant (1992)
 - Single Photon Emitted Computed Tomography (SPECT) (1992)

Chapter- 10 : Magnetic Resonance Imaging

- Describe in detail the principle of MR imaging and its applications (2010)
- **Short notes:**
 - Gradient coils used in MRI (2012) (2005) Magnetic and gradient coils used in MRI (2011)
 - Principles of MRI (2008) (2007) (2003) (2001) (1993) Physical principle of MRI (1994)

Hagga's CT & MRI of the Whole Body

Chapter- 50 : Image-Guided Interventions: CT Emphasis

- **Short notes:**
 - Risk of Interventional Radiology (2010)

Chapter- 51 : Basic CT Physics, Instrumentation & Parameters for Dose Management

- **Short notes:**
 - Fourth generation CT (2008)
 - Multi-slice C.T. (2006) (2003)
 - Advantages of spiral CT on conventional CT (2003)
 - Principles of Spiral CT (2002)
 - Spiral CT (1997)

Clark's positioning in Radiography

Chapter- 11 : The Abdomen and Pelvic Cavity

- Discuss the various views and techniques of acquiring a plain X-Ray abdomen. Mention the single best indication of each of these views. Which of these is most useful for early detection of bowel injury and why? (2011)

Chapman's A Guide to Radiological Procedures

Chapter- 09 : Arterial system

- Discuss principles, techniques and complications of angiography (2006)

Danhart's Radiology Review Manual

Chapter- 09 : Gastrointestinal tract

- Discuss the causes of hematemesis. How will you evaluate a patient presenting with hematemesis using various imaging modalities (2006) (1999)

Chapter- 11 : Obstetrics & Gynecology

- **Short notes:**
 - Foetus papyraceus (1999)
 - Sonographic signs in case of fetal death (1997)

Miscellaneous

- Imaging evaluation of midline swellings (2017)
- Role of radiological interventions in treatment of advanced malignancies (2012)
- Imaging in neonatal abdominal masses (2011)
- Write an essay on fetal environment (2010) [Stephenson – Obs & gynae –Chapter-17]
- What is M.S.C.T. scan? Describe its role in cardiac radiology (2007)
- Role of doppler in diabetic foot (2007)
- Describe the calcification seen in the physiological and normal state in the central and spinal nervous system with diagrams (2005)
- Describe in detail, the principles and technology of spiral CT scanner (2005) (2003) and its limitations (1998)
- Discuss role of isotopes in renal lesions (2004) (2003) Radionuclide imaging in renal disease (1996) (1992)
- Describe the Roentgen anatomy of larynx with special reference to laryngogram and its advantages over the conventional plain films in various laryngeal lesions (2000) (1992)
- How will you proceed to investigate a case of paraplegia in an adult patient; enumerate its various causes and radiological and computerized tomographic findings in each situations (2000)
- How will you investigate a middle age female patient with clinical diagnosis of jaundice (2000)
- Discuss the merits and demerits of MRI over CT (1999) (1993)
- Describe in detail the role of radiology in modern techniques of In vitro fertilization (1999)
- Write an essay on Radiobiology (1999)
- Discuss the role of interventional radiology in vascular diseases (1998)
- **Short notes:**
 - Inguinoscrotal swelling (2017)
 - PC PNDT Act Amendment Rules 2015 (2015)
 - PNDT Act (2012) (2007)
 - Cloud Computation in Radiology (2015)
 - Transjugular Kidney biopsy (2015)
 - Pseudotumors of mesentery (2012)
 - Laser printer (2011)
 - MR fistulogram vs. conventional fistulography for evaluation of fistula-in-ano (2011)
 - 3-D Reconstruction (2010)
 - Surface rendering (2010)
 - Gonad Shielding (2008)
 - Biological effects of Radiation (2007) (2006) (2001)
 - Physical characterization (2006)
 - Alkaptonuria (2006)

- Ring lesions in the brain on CT (2006)
- Mutation effect of X-ray (2006)
- Auto-transformer (2006) (2005)
- Charge coupling device (2006)
- Formation of radiographic films (2005) (2000)
- Plan of an ideal manual processing dark room (2005)
- Sonosal pingography (2005)
- Role of doppler in differentiating benign and malignant lesions (2005)
- Safe light (2002) (2000) (1999)
- CABBS (2002)
- LASER (2007) (2002)
- Fixer (2002) (1999)
- Replenisher (2002)
- Single sided emulsion film (2002)
- Mass miniature radiography (2001) (1993)
- Wilhelm Conard Roentgen (2001)
- US imaging in Parasitic disease (2001)
- Radiological anatomy of Laryngopharynx (2000)
- Echocardiography (1999) (1995)
- Transformers (1999)
- Roentgen (1998)
- X-ray v/s USG beam (1995)
- Automatic processing (1995) Advantages and disadvantages of auto-processing (1994)
- Silver recovery by electrolysis (1995)
- Soft tissue calcification (1995)
- Gamma factor of radiographic film (1994)
- High kV radiography (1994) (1992)
- Tube rating charts (1993)
- Gasless abdomen (1993)
- Ultrasonography in Primary sterility (1993)
- Stroboscopic effect (1992)
- Peroral pneumo colon (1992)
- Progeria (1992)
- Milk alkali syndrome (1992)
- Transesophageal echocardiography (1992)