TABLE OF SPECIFICATIONS FOR MD RADIOLOGY (INTERMEDIATE EXAMINATION)

Sr.#	SUBJECT	TOPIC	SUBTOPIC	MCQ
1.	**PRINCIPLES OF GENERAL SURGERY**	Principles of operative surgery	• Diagnosis and management of common surgical conditions • Surgical infections and topical infections • Use of drains, hemostasis, blood products	9
		Miscellaneous	• Anatomy • Principles of oncology	8+2
		Trauma	• Trauma/ disaster/ burns • Emergency procedures (X Ray, FAST scan, USG, CT)	1+9
		Post operative care and assessment	• Professionalism and law, patient safety and quality improvement • Antibiotics	3
		Investigations	• Technical skills (central venous line insertion, chest drain insertion, peritoneal lavage, tests for blood clotting disorders, role of VQ scanning. CT angiography, thrombolysis, place for pulmonary embolectomy, role of duplex scanning, venography, and d dimer measurement)	3
		TOTAL		**35**
2.	**PRINCIPLE OF GENERAL MEDICINE**	Cardiovascular medicine	• Principles of cardiovascular physiology • Arrhythmias • IHD • Heart failure • Hypertension • Valvular disease • Endocarditis • Aortic dissection	2
		Physiology and pathology	• General principles of physiology • General principles of pathology	2

			• Aortic dissection	
		Physiology and pathology	• General principles of physiology • General principles of pathology	2
		Pharmacology	• Pharmacology of major drug classes: insulin, alpha and beta blockers, ACE, digoxin, ARBS, CCB, anticoagulants, diuretics, thyroxine, anti-thyroid drugs, corticosteroids, sex hormones, anti-spasmodic, amino salicylates, bronchodilators, antibiotics, NSAIDS, allopurinol, bisphosphonate, antiemetics, anxiolytics • Poisoning (paracetamol, aspirin, Carbon monoxide, opiates, beta blockers, TCAs) • Effects of drugs on pregnancy, age, renal and liver impairment • Contrast media	1
		Diabetes and endocrine medicine	• Adrenocortical insufficiency • Thyroid dysfunction	3
		GIT and hepatobiliary	• Peptic Ulceration and Gastritis • Iron Deficiency Anemia • Acute Gi Bleeding • Gi Malignancy • Pancreatitis, Cholecystitis, Appendicitis • IBS, IBD • Celiac Disease • Achalasia • Gallstones • Viral Hepatitis • Liver Cirrhosis • Alcoholic Liver Disease • Liver Dysfunction: Jaundice, Ascites, Encephalopathy	3+2
		Genitourinary Radiology	• Normal physiology • Acute chronic renal failure • UTI • Stones • Glomerulonephritis • Urethral Pathologies • BPH • Prostate cancer • Uterine pathologies • Ovarian pathology	1+4

		Respiratory medicine	• COPD • HIV AIDS • Pneumonia • ARDS • Pleural disease • Lung cancer • Respiratory failure • Tuberculosis • Interstitial lung disease • Bronchiectasis • DVT and pulmonary embolism • Pulmonary hypertension	5
		Allergy	• Anaphylaxis • Occupation associated allergies • Urticaria, angioedema	1
		Hematology	• Thrombocytopenia • Leukemia • Lymphoma • Myeloma • Myeloproliferative disorder • Hemolytic disease • Anemia • Thalassemia, sickle cell disease	2
		CNS	• Cerebrovascular accidents • Meningo-encephalitis • Seizure & epilepsy • Multiple sclerosis	4
		MSK	• Septic arthritis • Rheumatoid arthritis • Osteoarthritis • Osteoporosis • Polymyalgia and temporal arteritis • Acute connective tissue disease	3
		Procedural competencies	• Chest radiograph • Abdominal radiograph • Joint radiographs (knee, hip, hands, shoulder, elbow, dorsal spine, ankle) • Advanced Competencies; Ultrasound • Detailed imaging: CT • Neuroangiography, high resolution CT, • MRI	2
		TOTAL		**35**

3.	**PHYSICS APPLIED TO RADIOLOGY**	Basic principles of Electromagnetic radiation	Structure of atom, Matter EM radiation & Magnet/electromagnetism	1
		Production of X rays	X ray production, measurement, tube, emission, interaction with matter	4
		Radiological image	Image quality, scatter, screen film radiography and technique	4
		Mammography	• requirements and standards • interpretation • pathological and mammographic appearance, clinical features significance, and prognosis of malignant breast disorders • breast USG • quality control • ADH and LCIS • Artifacts	2
		Fluoroscopy and IR	General principles	2
		CT	• basic principle of CT • types • advantages • disadvantages • limitations	3
		MRI	MRI basic working principles	3
		Artifacts	Artifacts in different imaging techniques	2
		Radiobiology	• Repair of DNA damage • redistribution of cells in the cell cycle • repopulation and • reoxygenation of hypoxic tumor areas.	2
		USG and Doppler	General principles	2
		Radiation protection	• Biological effects • Relevant codes of practice • recommendations of I.C.R.P. • protection regulations • risk estimates • population, somatic and genetic dose • personnel monitoring • doses received in diagnostic procedures	2
		Barium studies	barium swallow, enema, follow through	3
		TOTAL		**30**

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29/05/2024.

PRINCIPLES OF GENERAL SURGERY	**35**
PHYSICS APPLIED TO RADIOLOGY	**30**
PRINCIPLES OF GENERAL MEDICINE	**35**
TOTAL	**100**

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2. Clinical Examination----------

Each station carries 10 marks. One station is further divided into two halves carrying 5 marks each.

	Sr. #	Content of TOACS	Observed Stations	Marks
Principals of Radiology	1.	**CVS:** • Heart • Vessels	1	10
	2.	**GIT:** • Upper & Pancreas • Lower	1	10
	3.	**CNS:** • Brain • Spine	1	10
	4.	**Urogenital:** • Kidney, ureter, • bladder, male urethra, prostate	1	10
	5.	**MSK:** • Bone, soft tissue • Joints	1	10
	6.	**Pediatrics:** • Congenital • Acquired	1	10
	7.	**Respiratory:** • X-ray • CT	1	10
	8.	**Hepatobiliary:** • Liver • Biliary	1	10
	9.	**Women imaging:** • Gynecology & Obstetrics • Breast	1	10