

**FINAL EXAMINATION FOR THE FELLOWSHIP IN CLINICAL RADIOLOGY – PART A**

**Candidate Reference Sheet**

This reference sheet is for candidate use during the single best answer (SBA) question papers. It provides information about frequently used abbreviations and normal ranges for investigations.

**ABBREVIATIONS**

<b>5-HIAA</b>	5-hydroxyindoleacetic acid
<b><sup>18</sup>F FDG</b>	<sup>18</sup> fluoro-2-deoxy-D-glucose
<b><sup>67</sup>Ga</b>	gallium-67
<b><sup>99m</sup>Tc</b>	technetium-99m
<b><sup>99m</sup>Tc HDP</b>	technetium-99m hydroxymethylene diphosphonate
<b><sup>99m</sup>Tc HMPAO</b>	technetium-99m hexamethylpropyleneamine oxime
<b><sup>111</sup>I</b>	indium-111
<b><sup>123</sup>I-MIBG</b>	iodine-123 meta-iodobenzyl guanidine
<b><sup>131</sup>I</b>	iodine-131
<b><sup>133</sup>Xe</b>	xeon-133
<b>AAA</b>	abdominal aortic aneurysm
<b>ABER</b>	abduction and external rotation
<b>AC</b>	acromioclavicular
<b>ACA</b>	anterior cerebral artery
<b>ACE</b>	angiotensin converting enzyme
<b>ACL</b>	anterior cruciate ligament
<b>ACTH</b>	adrenocorticotrophic hormone
<b>ADC</b>	apparent diffusion coefficient
<b>ADEM</b>	acute disseminated encephalomyelitis
<b>ADH</b>	antidiuretic hormone
<b>AF</b>	atrial fibrillation
<b>AFP</b>	alphafetoprotein
<b>AIDS</b>	acquired immune deficiency syndrome
<b>ALPSA</b>	anterior labral periosteal sleeve avulsion
<b>ALT</b>	alanine aminotransferase
<b>ALVAL</b>	aseptic lymphocyte-dominated vasculitis-associated lesion
<b>AML</b>	acute myeloid leukaemia
<b>ANCA</b>	anti-neutrophil cytoplasmic antibodies
<b>AP</b>	anteroposterior
<b>APTT</b>	activated partial thromboplastin time
<b>ARDS</b>	adult respiratory distress syndrome
<b>ASD</b>	atrial septal defect
<b>AV</b>	arteriovenous
<b>AVM</b>	arteriovenous malformation
<b>βHCG</b>	beta-human chorionic gonadotrophin
<b>BPH</b>	benign prostatic hyperplasia
<b>CA 125</b>	cancer antigen 125
<b>CABG</b>	coronary artery bypass graft

<b>CADASIL</b>	cerebral autosomal dominant arteriopathy with subcortical infarcts and leucoencephalopathy
<b>CAM</b>	cavernous angiomatous malformation
<b>CBD</b>	common bile duct
<b>CCD</b>	charge coupled device
<b>CEA</b>	carcinoembryonic antigen
<b>CECT</b>	contrast-enhanced computed tomography
<b>CFA</b>	common femoral artery
<b>CJD</b>	Creutzfeldt-Jakob disease
<b>CKD</b>	chronic kidney disease
<b>CLD</b>	chronic lung disease
<b>CMV</b>	cytomegalovirus
<b>CNS</b>	central nervous system
<b>CO<sub>2</sub></b>	carbon dioxide
<b>COP</b>	cryptogenic organising pneumonia
<b>COPD</b>	chronic obstructive pulmonary disease
<b>CPAM</b>	congenital pulmonary airway malformation
<b>CPPD</b>	calcium pyrophosphate deposition disease
<b>CR</b>	computed radiography
<b>CRP</b>	C-reactive protein
<b>CSF</b>	cerebrospinal fluid
<b>CSOM</b>	chronic secretory otitis media
<b>CT</b>	computed tomography
<b>CTA</b>	CT angiography
<b>CTC</b>	CT colonography
<b>CTPA</b>	CT pulmonary angiogram
<b>DAI</b>	diffuse axonal injury
<b>DaTSCAN</b>	dopamine active transporter scan
<b>DCE</b>	dynamic contrast-enhanced
<b>DCIS</b>	ductal carcinoma in situ
<b>DIOS</b>	distal intestinal obstruction syndrome
<b>DIP</b>	desquamative interstitial pneumonia
<b>DISH</b>	diffuse idiopathic skeletal hyperostosis
<b>DIPJ</b>	distal interphalangeal joint
<b>DISI</b>	dorsal intercalated segment instability
<b>DJ</b>	duodenojejunal
<b>DMSA</b>	dimercaptosuccinic acid
<b>DNET</b>	dysembryoplastic neuroepithelial tumour
<b>DP</b>	dorsoplantar
<b>DSA</b>	digital subtraction angiography
<b>DR</b>	digital radiography
<b>DSA</b>	digital subtraction angiography
<b>DTPA</b>	diethylene-triamine penta-acetic acid
<b>DVT</b>	deep vein thrombosis
<b>DW</b>	diffusion weighted
<b>DWI</b>	diffusion-weighted imaging
<b>EAA</b>	extrinsic allergic alveolitis
<b>ECG</b>	electrocardiogram
<b>ECMO</b>	extracorporeal membrane oxygenation
<b>ED</b>	emergency department
<b>EEG</b>	electroencephalogram
<b>eGFR</b>	estimated glomerular filtration rate
<b>ENT</b>	ear, nose and throat
<b>Eob</b>	ethoxybenzyl

<b>ER</b>	emergency room
<b>ERCP</b>	endoscopic retrograde cholangiopancreatography
<b>ESR</b>	erythrocyte sedimentation rate
<b>ESWL</b>	extracorporeal shockwave lithotripsy
<b>ETT</b>	endotracheal tube
<b>EUA</b>	examination under anaesthesia
<b>EUS</b>	endoscopic ultrasound
<b>EVAR</b>	endovascular aneurysm repair
<b>F2</b>	Foundation Year 2
<b>FAST</b>	focused abdominal ultrasonography in trauma
<b>FBC</b>	full blood count
<b>FDG</b>	fluorodeoxyglucose
<b>FEES</b>	fibre-optic endoscopic evaluation of swallowing
<b>FESS</b>	functional endoscopic sinus surgery
<b>FEV1</b>	forced expired volume in one second
<b>FLAIR</b>	fluid attenuated inversion recovery
<b>FMH</b>	fibromuscular hyperplasia
<b>FNA</b>	fine needle aspiration
<b>FNAC</b>	fine needle aspiration cytology
<b>FNH</b>	focal nodular hyperplasia
<b>FOB</b>	faecal occult blood
<b>FS</b>	fat suppressed
<b>FSE</b>	fast spin echo
<b>FSH</b>	follicle stimulating hormone
<b>GB</b>	gall bladder
<b>GBM</b>	glioblastoma multiforme
<b>GCS</b>	Glasgow coma score
<b>G-CSF</b>	granulocyte-colony stimulating factor
<b>Gd</b>	gadolinium
<b>Gd-EOB-DTPA</b>	gadolinium ethoxybenzyl diethylenetriamine penta-acetic acid
<b>GE</b>	gradient echo
<b>GGT</b>	gamma-glutamyl transpeptidase / gamma-glutamyl transferase
<b>GI</b>	gastrointestinal
<b>GIST</b>	gastrointestinal stromal tumour
<b>GOJ</b>	gastro-oesophageal junction
<b>GP</b>	general practitioner
<b>GPA</b>	granulomatosis with polyangiitis
<b>GRE</b>	gradient recalled echo
<b>GTN</b>	glyceryl trinitrate
<b>H1N1</b>	influenza A
<b>HAART</b>	highly active antiretroviral therapy
<b>HAGL</b>	humeral avulsion glenohumeral ligament
<b>HBsAg</b>	hepatitis B surface antigen
<b>HCC</b>	hepatocellular carcinoma
<b>HDU</b>	high dependency unit
<b>HELLP</b>	haemolytic anemia, elevated liver enzymes and low platelet
<b>HHT</b>	hereditary haemorrhagic telangiectasia
<b>HIDA</b>	hepatic iminodiacetic acid
<b>HIFU</b>	high intensity focused ultrasound
<b>HIV</b>	human immunodeficiency virus
<b>HLA-B27</b>	human leucocyte antigen B27

<b>HLRCC</b>	hereditary leiomyomatosis and renal cell cancer
<b>HMPAO</b>	hexamethylpropyleneamine oxime
<b>HOA</b>	hypertrophic osteoarthropathy
<b>HP</b>	hypersensitivity pneumonitis (formerly EAA)
<b>HPOA</b>	hypertrophic pulmonary osteoarthropathy
<b>HR</b>	high-resolution
<b>HRCT</b>	high-resolution computed tomography
<b>HRT</b>	hormone replacement therapy
<b>HSG</b>	hysterosalpingogram
<b>HU</b>	Hounsfield unit
<b>IA</b>	intra-arterial
<b>IAM</b>	internal auditory meatus
<b>ICA</b>	internal carotid artery
<b>IDA</b>	iminodiacetic acid
<b>IgG4</b>	immunoglobulin G4- related disease
<b>IHH</b>	infantile hepatic hemangioma
<b>IJV</b>	internal jugular vein
<b>IM</b>	intramuscular
<b>IMA</b>	inferior mesenteric artery
<b>INR</b>	international normalised ratio
<b>IPF</b>	idiopathic pulmonary fibrosis
<b>ITU</b>	intensive therapy unit
<b>IUCD</b>	intrauterine contraceptive device
<b>IV</b>	intravenous
<b>IVC</b>	inferior vena cava
<b>IVF</b>	in vitro fertilisation
<b>IVU</b>	intravenous urography/urogram
<b>JIA</b>	juvenile idiopathic arthritis
<b>JVP</b>	jugular venous pressure
<b>KUB</b>	kidney, ureter and bladder
<b>kV</b>	kilovoltage
<b>LAD</b>	left anterior descending
<b>LAM</b>	lymphangi leiomyomatosis
<b>LAO</b>	left anterior oblique
<b>LCH</b>	Langerhans cell histiocytosis
<b>LDH</b>	lactate dehydrogenase
<b>LFTs</b>	liver function tests
<b>LH</b>	luteinising hormone
<b>LIQ</b>	lower inner quadrant
<b>LIP</b>	lymphocytic interstitial pneumonitis
<b>LMP</b>	last menstrual period
<b>LMWH</b>	low molecular weight heparin
<b>LOQ</b>	lower outer quadrant
<b>LV</b>	left ventricle
<b>mA</b>	tube current
<b>MAA</b>	macroaggregated albumin
<b>MAG3</b>	mercaptoacetyl triglycine
<b>MALToma</b>	mucosa-associated lymphatic tissue lymphoma
<b>MCA</b>	middle cerebral artery
<b>MCL</b>	medial collateral ligament
<b>MCP</b>	metacarpophalangeal
<b>MCUG</b>	micturating cystourethrogram
<b>MCV</b>	mean corpuscular volume

<b>MDCT</b>	multidetector computed tomography
<b>MDP</b>	methylene diphosphonate
<b>MDT</b>	multidisciplinary team
<b>ME</b>	myalgic encephalomyelitis
<b>MELAS</b>	mitochondrial encephalomyopathy, lactic acidosis, and stroke-like episodes
<b>MEN</b>	multiple endocrine neoplasia
<b>MI</b>	mechanical index
<b>MIBI</b>	methoxyisobutylisonitrile
<b>MIBG</b>	metaiodobenzylguanidine
<b>Mn-DPPD</b>	manganese dipyridoxal diphosphate
<b>MPO</b>	myeloperoxidase
<b>MR</b>	magnetic resonance
<b>MRA</b>	magnetic resonance angiography
<b>MRCP</b>	magnetic resonance cholangiopancreatography
<b>MRI</b>	magnetic resonance imaging
<b>MRU</b>	magnetic resonance urography
<b>MRV</b>	magnetic resonance venography
<b>MS</b>	multiple sclerosis
<b>MSU</b>	mid-stream urine
<b>MTP</b>	metatarsophalangeal
<b>MTPJ</b>	metatarsophalangeal joint
<b>NASCET</b>	North American Symptomatic Carotid Endarterectomy Trial
<b>NASH</b>	non-alcoholic steatohepatitis
<b>NAI</b>	non-accidental injury
<b>NBSS</b>	National Breast Screening Service
<b>NEC</b>	necrotising enterocolitis
<b>NET</b>	neuroendocrine tumour
<b>NF-1</b>	neurofibromatosis Type 1
<b>NG</b>	nasogastric
<b>NICE</b>	National Institute for Health and Clinical Excellence
<b>NJ</b>	nasojejunal
<b>NMDA</b>	N-Methyl-D-aspartate
<b>NPV</b>	negative predictive value
<b>NSAIDs</b>	non-steroidal anti-inflammatory drugs
<b>NSF</b>	nephrogenic systemic fibrosis
<b>NSIP</b>	non-specific interstitial pneumonia
<b>OA</b>	osteo-arthritis
<b>OARs</b>	Ottawa ankle rules
<b>OGD</b>	oesophagogastroduodenoscopy
<b>OM</b>	occipitomenal
<b>OPG/T</b>	orthopantomography/orthopantomogram
<b>PR3</b>	proteinase 3
<b>PA</b>	posteroanterior
<b>p-ANCA</b>	perinuclear anti-neutrophil cytoplasmic antibodies
<b>PCA</b>	posterior cerebral artery
<b>PCNL</b>	percutaneous nephrolithotomy
<b>PCOS</b>	polycystic ovary syndrome
<b>PCOM</b>	posterior communicating
<b>PCL</b>	posterior cruciate ligament
<b>PCP</b>	Pneumocystis pneumonia / Pneumocystis jiroveci pneumonia
<b>PDA</b>	patent ductus arteriosus
<b>PDW</b>	proton-density-weighted

<b>PE</b>	pulmonary embolism
<b>PET</b>	positron emission tomography
<b>PICA</b>	posterior inferior cerebellar artery
<b>PICU</b>	paediatric intensive care unit
<b>PIP</b>	proximal interphalangeal
<b>PIPJ</b>	proximal interphalangeal joint
<b>PMB</b>	post-menopausal bleeding
<b>PMC</b>	pseudomembranous colitis
<b>PML</b>	progressive multifocal leucoencephalopathy
<b>PMR</b>	polymyalgia rheumatica
<b>PNET</b>	primitive neuroectodermal tumour
<b>PR</b>	per rectum
<b>PRES</b>	posterior reversible encephalopathy syndrome
<b>PSA</b>	prostate specific antigen
<b>PT</b>	prothrombin time
<b>PTC</b>	percutaneous transhepatic cholangiography
<b>PTH</b>	parathyroid hormone
<b>PTLD</b>	post-transplant lymphoproliferative disorder
<b>PUJ</b>	pelviureteric junction
<b>PV</b>	per vagina
<b>PVA</b>	polyvinyl alcohol
<b>PVNS</b>	pigmented villonodular synovitis
<b>RB-ILD</b>	respiratory bronchiolitis-associated interstitial lung disease
<b>RCC</b>	renal cell carcinoma
<b>RDS</b>	respiratory distress syndrome
<b>RICH</b>	rapidly involuting congenital haemangioma
<b>RIF</b>	right iliac fossa
<b>RF</b>	radiofrequency
<b>RPF</b>	retroperitoneal fibrosis
<b>RR</b>	respiratory rate
<b>RSD</b>	reflex sympathetic dystrophy
<b>RTC</b>	road traffic collision
<b>RUQ</b>	right upper quadrant
<b>RV</b>	right ventricular
<b>SAPHO</b>	synovitis acne pustulosis hyperostosis osteitis
<b>SCC</b>	squamous cell carcinoma
<b>SE</b>	spin echo
<b>SFA</b>	superficial femoral artery
<b>SI</b>	sacroiliac
<b>SLAP</b>	superior labrum anterior to posterior tear
<b>SLE</b>	systemic lupus erythematosus
<b>SMA</b>	superior mesenteric artery
<b>SMV</b>	submentovertex
<b>SPECT</b>	single photon emission computed tomography
<b>SPEN</b>	solid and papillary epithelial neoplasm
<b>SPGR</b>	spoiled gradient recalled echo
<b>SPIO</b>	superparamagnetic iron oxide
<b>SPN</b>	solitary pulmonary nodule
<b>STIR</b>	short tau inversion recovery
<b>SUV</b>	standardised uptake value
<b>SVC</b>	superior vena cava
<b>SWI</b>	susceptibility-weighted imaging
<b>T1FS</b>	T1-weighted fat suppressed spin echo
<b>T1W</b>	T1-weighted

<b>T2W</b>	T2-weighted
<b>T2WI</b>	T2-weighted image
<b>TACE</b>	trans-arterial chemoembolisation
<b>TAPVD</b>	total anomalous pulmonary venous drainage
<b>TB</b>	tuberculosis
<b>Tc-HIDA</b>	technetium hepatic iminodiacetic acid
<b>TE</b>	echo time
<b>TI</b>	thermal index
<b>TIA</b>	transient ischemic attack
<b>TIPSS</b>	transjugular intrahepatic portosystemic shunt
<b>TMT</b>	tarsometatarsal
<b>TNM</b>	tumor, node, metastasis staging
<b>TKR</b>	total knee replacement
<b>TORCH</b>	TOxoplasmosis, Rubella, Cytomegalovirus and Herpes
<b>TR</b>	repetition time
<b>TRUS</b>	transrectal ultrasound
<b>TSE</b>	turbo spin echo
<b>TSH</b>	thyroid stimulating hormone
<b>TURBT</b>	transurethral resection of bladder tumour
<b>TURP</b>	transurethral resection of the prostate
<b>TVUS</b>	transvaginal ultrasound
<b>UAC</b>	umbilical arterial catheter
<b>UIQ</b>	upper inner quadrant
<b>UIP</b>	usual interstitial pneumonia
<b>USPIO</b>	ultrasmall superparamagnetic iron oxide particles
<b>USS</b>	ultrasound scan
<b>UOQ</b>	upper outer quadrant
<b>UTI</b>	urinary tract infection
<b>UVC</b>	umbilical venous catheter
<b>VA</b>	vertebral artery
<b>VATER</b>	vertebrae, anus, trachea, oesophagus, radial and renal
<b>VATS</b>	video-assisted thoracic surgery
<b>VHL</b>	von Hippel-Lindau
<b>VMA</b>	vanillylmandelic acid
<b>VQ</b>	ventilation perfusion
<b>VSD</b>	ventricular septal defect
<b>VUJ</b>	vesicoureteric junction
<b>WCC</b>	white cell count
<b>WHO</b>	World Health Organisation

## NORMAL RANGES

alanine aminotransferase (ALT)	5 – 35 U/L
alkaline phosphatase (alkP)	45 – 105 U/L
alphafetoprotein (AFP)	< 44 µg/L
bilirubin	1 – 22 µmol/L
calcium	2.2 – 2.6 mmol/L
cancer antigen 125 (CA 125)	< 35 U/mL
CD4	500 – 1600 cells/mm <sup>3</sup>
C-reactive protein (CRP)	< 10 mg/L
creatinine	60 – 100 µmol/L
eGFR	70 – 140 mL/min
erythrocyte sedimentation rate (ESR)	0 – 20 mm/first hour
gamma-glutamyl transferase	4 – 35 U/L
glomerular filtration rate (GFR)	70 – 140 mL/min
glucose (fasting)	3.0 – 6.0 mmol/L
haemoglobin (Hb)	130 – 180 g/L (males) 115 – 165 g/L (females)
INR	0.5 – 1.2
MCV	80 – 96 fL
phosphate	0.8 – 1.4 mmol/L
platelet count	150 – 400 × 10 <sup>9</sup> /L
potassium	3.5 – 4.9 mmol/L
prolactin	80 – 520 mU/L
prostate specific antigen (PSA)	< 4 µg/L
prothrombin time	11-15 seconds
serum cholesterol	< 5.2 mmol/L
sodium	137 – 144 mmol/L
thyroid stimulating hormone (TSH)	0.3 – 5.5 mIU/L
urea	2.5 – 7.5 mmol/L
white cell count (WCC)	4 – 11 × 10 <sup>9</sup> /L

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