

# Before Licensing Examination > Useful Resources

# Topics

The following is a list of topics for reference; the list is neither exclusive nor exhaustive. Candidates are expected to have a good understanding of the biomedical basis and clinical management, where appropriate, of these conditions. Please note that the same topic can appear in more than one discipline if deemed appropriate.

## <u>Medicine</u>

#### Cardiology

- Ischaemic heart disease
- Heart failure
- Arrhythmia and heart block
- Cardiac emergencies (e.g. acute pulmonary oedema, cardiac arrest, cardiogenic shock, cardiac tamponade)
- · Essential hypertension
- Secondary hypertension
- · Systemic disorders affecting the heart
- · Cardiomyopathies and myocarditis
- Valvular heart diseases
- Infective endocarditis
- Diseases of the pericardium (e.g. pericarditis)
- Diseases of the aorta (e.g. aortic dissection)
- Adult congenital heart diseases (e.g. atrial septal defect, ventricular septal defect)
- Diseases of the arteries (e.g. arterial thrombosis, atherosclerosis)
- Diseases of the veins (e.g. deep vein thrombosis, superior vena cava obstruction)
- Molecular and cellular cardiology

#### Endocrinology & Metabolism

- Metabolic syndrome
- Diabetes mellitus
- Lipid disorders
- · Graves' disease and thyroid storm
- · Hypothyroidism and myxoedema coma
- · Acute and subacute thyroiditis
- Hypopituitarism
- · Pituitary tumours



- Acromegaly
- Growth hormone deficiency
- Hyperprolactinaemia
- Diabetes insipidus
- Syndrome of inappropriate ADH secretion (SIADH)
- Hypogonadism
- Cushing's syndrome
- Adrenal gland disorders (e.g. adrenal insufficiency, primary hyperaldosteronism)
- Gynaecomastia
- Hirsutism
- · Disorders of calcium and phosphate metabolism
- · Osteomalacia and metabolic bone diseases
- Osteoporosis

## Gastroenterology & Hepatology

- · Malignancy of the gastrointestinal tract
- · Infections of the gastrointestinal tract
- Gastro-oesophageal reflux disease
- Helicobacter pylori infection
- · Gastric and duodenal ulcers
- NSAID gastropathy
- · Functional dyspepsia
- · Irritable bowel syndrome
- Food poisoning
- Malabsorption
- Inflammatory bowel diseases (ulcerative colitis and Crohn's disease)
- Intestinal obstruction
- Acute pancreatitis
- · Cholangitis and gallstones
- Pancreatic cancer
- · Systemic disorders affecting the liver
- Drug-induced liver injury
- Viral hepatitis (hepatitis A to E)
- Toxic, drug-induced and autoimmune hepatitis
- Alcoholic liver disease



- Non-alcoholic fatty liver disease
- Hepatocellular carcinoma
- · Cirrhosis and portal hypertension
- · Primary biliary cirrhosis
- Wilson's disease
- · Variceal bleeding
- · Ascites and spontaneous bacterial peritonitis
- Hepatic encephalopathy
- · Acute liver failure and liver transplantation

## Haematology & Oncology

- Anaemia and other related disorders (e.g. anaemia associated with systemic diseases, G6PD deficiency)
- Bleeding tendency (e.g. immune thrombocytopenic purpura, disseminated intravascular coagulation, thrombotic thrombocytopenia purpura, Vitamin K deficiency, haemophilia, Von Willebrand disease)
- Thrombotic tendency (e.g. deep vein thrombosis, pulmonary embolism, inherited and acquired thrombophilias)
- Haematological malignancies (e.g. acute leukaemia, myeloproliferative disorders, lymphoproliferative disorders, multiple myeloma)
- Bone marrow failure (e.g. aplastic anaemia, pure red cell aplasia, myelodysplastic syndrome, drug-induced agranulocytosis)
- Blood transfusion
- Haematopoietic cell transplantation
- General oncology
- Cancer treatment (including target and immunomodulatory therapies)
- Complications of cancer treatment
- Oncological emergencies
- Paraneoplastic syndromes
- Palliative Care

## Nephrology

- Systemic disorders affecting the kidney
- · Acute kidney injury (acute renal failure)
- · Chronic renal failure
- Preventing progression of chronic kidney disease
- Glomerular diseases (e.g. primary and secondary renal parenchymal diseases)
- Tubulointerstitial diseases (e.g. polycystic kidney disease)



- Urinary tract infection
- Fluids, electrolytes and acid-base disorders
- · Renal stones and urinary obstruction
- Dialysis
- · Renal transplantation

#### Neurology

- Cerebrovascular disease
- · Seizures and epilepsy
- · Parkinson's disease and other movement disorders
- · Infections of the central nervous system
- Cognitive disorders (e.g. Alzheimer's disease, vascular dementia, other treatable entities such as nutritional deficiencies)
- Peripheral nerve disorders (e.g. systemic causes, chronic inflammatory demyelinating polyneuropathy, hereditary motor and sensory neuropathy, Guillain-Barré syndrome)
- Myasthenia gravis
- Motor neuron disease
- Multiple sclerosis
- Muscular disorders (e.g. systemic causes, muscular dystrophy, polymyositis, rhabdomyolysis)
- Spinal cord disorders (e.g. cord compression, cord tumours, cervical myelopathy, prolapsed disc)
- Primary headache disorders (e.g. migraine, tension headache, cluster headache, neuralgia)
- · Coma and brain death
- Benign intracranial hypertension
- Normal pressure hydrocephalus
- Confusion and delirium
- Metabolic encephalopathy
- · Cerebellar disorders
- · Brain tumours
- Neurorehabilitation
- · Head, spinal cord and nerve injuries

#### **Respiratory Medicine**

- Respiratory infections in immunocompetent and immunocompromised hosts (e.g. influenza, common respiratory viruses, bacterial pneumonia, tuberculosis)
- · Severe acute respiratory syndrome (SARS)



- Allergic rhinitis
- Asthma
- Bronchiectasis
- · Chronic obstructive pulmonary disease (COPD)
- · Interstitial/inflammatory lung diseases
- Restrictive lung diseases from chest wall and neuromuscular diseases
- Obstructive sleep apnoea
- Cor pulmonale
- Respiratory failure
- Acute respiratory distress syndrome (ARDS)
- Lung cancer
- Pulmonary vascular diseases
- Non-invasive ventilation
- · Diseases of the pleura and mediastinum
- · Occupational and environmental lung diseases
- Lung transplantation

#### Rheumatology & Immunology

- · Rheumatoid arthritis
- · Seronegative spondyloarthritis
- Infective arthritis
- · Crystal arthritis
- Osteoarthritis
- Systemic lupus erythematosus (SLE)
- Other collagen vascular diseases (e.g. systemic sclerosis, undifferentiated connective tissue disorder, dermatomyositis, polymyalgia rheumatica, Sjogren's syndrome)
- Vasculitides
- Drug-induced immunodeficiency
- Allergies and allergic conditions (e.g. drug allergy, food allergy, anaphylaxis)

#### Geriatrics

- Ageing and frailty
- Age-related biological changes and vulnerability to diseases
- Evaluation of geriatric patients
- Principles and organisation of care for geriatric patients



- Geriatric syndromes (e.g. falls and impaired mobility, neurological problems, sleep disorders, dementia, delirium, psycho-geriatric problems, pressure sores, constipation, incontinence, nutritional deficiencies)
- Common causes of hospital admissions
- Geriatric rehabilitation
- Prevention and health promotion for successful ageing
- Community geriatrics and long-term care
- End-of-life care (e.g. advanced directives and care planning, resuscitation decisions, difficult ethical dilemmas)

#### Infectious Diseases

- Community acquired infections
- Health care associated infections
- Infections in transplant recipients
- Common viral infections including respiratory infections as stated above, Herpesviridae infections, measles, mumps and rubella
- · Common bacterial, fungal and parasitic infections
- Pyrexia of unknown origin
- Septicaemia
- Tropical medicine
- Malaria
- Dengue fever
- HIV infection and acquired immune deficiency syndrome (AIDS)
- Highly active antiretroviral therapy (HAART) for patients with human immunodeficiency virus (HIV)
- Emerging infections (e.g. COVID-19)

## **Sexually Transmitted Diseases**

- Urethral discharge
- Genital ulcer
- Vaginal discharge
- Gonorrhoea
- Chlamydial infections
- Chancroid
- Syphilis
- Herpes
- HIV infection



# Dermatology

- Eczema and dermatitis
- Psoriasis
- Acne
- Skin infections
- Life-threatening dermatoses (e.g. autoimmune blistering diseases, erythroderma, Stevens-Johnson syndrome, toxic epidermal necrolysis, pustular psoriasis, toxic shock syndrome)
- · Cutaneous manifestations of systemic diseases
- · Malignancy of the skin

## **Clinical Pharmacology**

- Good prescribing practice
- · Principles of clinical pharmacology
- · Adverse drug reactions and drug interactions
- Drugs and the liver
- Drugs and the kidneys
- Prescribing in the elderly
- Prescribing in pregnancy
- · Cardiovascular drug therapy
- Drug treatment of thromboembolism and bleeding
- Drug therapy for respiratory diseases
- Gastrointestinal drug therapy and drugs for inflammatory bowel diseases
- Clinical neuropharmacology
- · Non-steroidal anti-inflammatory drugs (NSAIDs) and corticosteroids
- · Antimicrobial drug therapy and prophylaxis
- Antiviral therapy
- Clinical toxicology (including common traditional Chinese medicine toxicity)
- Clinical drug trials
- · Pharmacogenetics and pharmacogenomics
- Drug utilisation studies and audits