

# Syllabus for the SICOT Diploma Examination



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Validated by SICOT Education, Examiner and Subspecialty Committees

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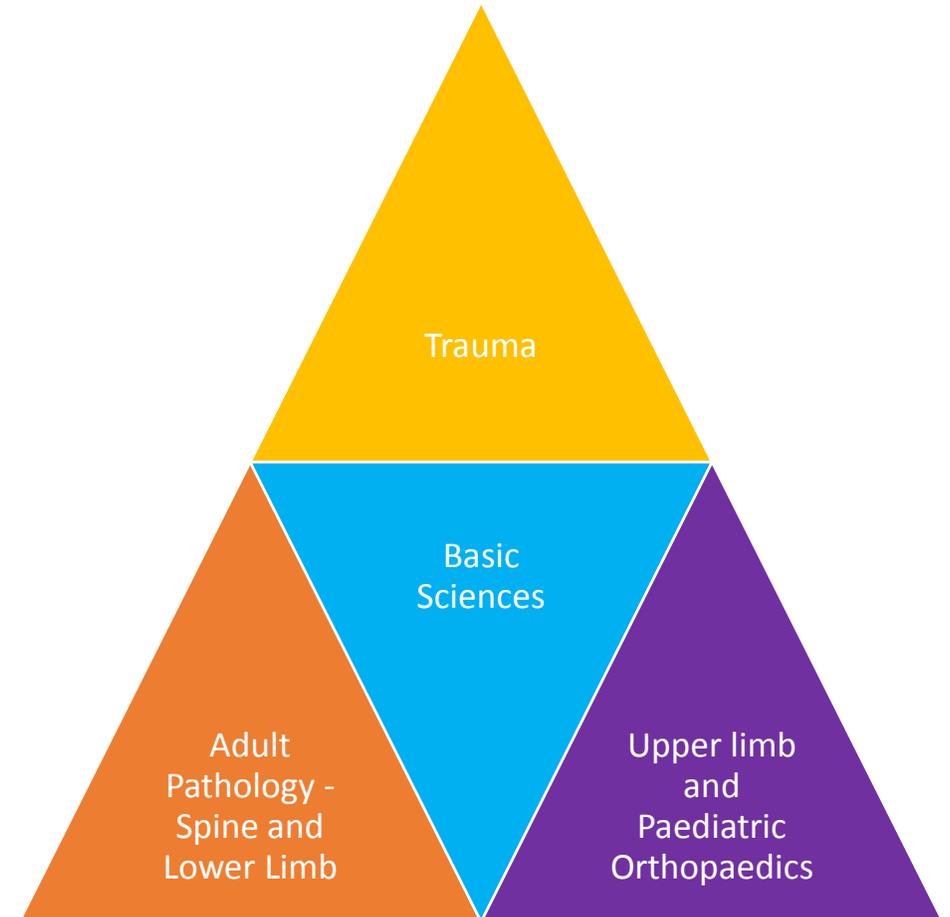
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**February 2016**

The SICOT diploma exam aims to set a global standard for examination in Trauma & Orthopaedics. The exam tests the core clinical knowledge and competence of the orthopaedic candidate or surgeon in practice. The syllabus for the exam is broad, covering the whole breadth of Trauma & Orthopaedics, which can be applied globally. The candidate must be able to demonstrate clinical knowledge and competence appropriate to orthopaedic and trauma surgery across the whole breadth.

**The syllabus is broadly divided into the following four domains**

1. Basic Sciences – including Oncology & Infection
2. Trauma
3. Adult Pathology – Spine and Lower Limb
4. Upper Limb and Paediatric Orthopaedics



# Section I - Basic Science – Including Oncology and Infection

The candidate must demonstrate adequate knowledge of the following

Anatomy and embryology of bone and joints

- Clinical and functional anatomy of hip, knee, shoulder, elbow, wrist, hand foot, ankle and spine, with an emphasis on applied surgical anatomy
- Relevant surgical approaches to upper and lower limbs, pelvis and spine
- Embryology; the growth and development of the organs of movement

Anatomy, structure and function of the following soft tissues

- Bone
- Articular Cartilage
- Meniscus
- Muscle and tendon
- Synovium
- Ligament
- Nerve
- Intervertebral disc

## Applied physiology and pathology of the following clinical conditions

- Shock -- types, physiology, recognition and treatment
- Principles of fracture healing
- Mechanisms of wound healing
- Metabolic and immunological response to trauma
- Blood loss and blood transfusion
- Fluid balance and resuscitation
- Venous Thromboembolism and Thromboprophylaxis
- Tendon injury and healing
- Ligament injury and healing
- Nerve injury and regeneration
- Calcium metabolism and hormonal regulation
- Haemophilia
- Osteoarthritis
- Osteoporosis
- Osteonecrosis
- Metabolic bone disease
- Rheumatoid arthritis – medical and surgical treatment
- Inflammatory and crystal arthropathies
- Neuromuscular disorders – assessment and management
- Heterotopic ossification
- Mechanisms and classification of failure of joint replacement
- Mechanisms and classification of peri--prosthetic fractures

- Tissue repair and the process of regeneration of skin, blood, bone, cartilage, arteries and veins
- Grafting techniques of skin, bone, tendons and nerve.

### Biomaterials, Implants, Prostheses and Orthoses

- Bone grafts, bone banking and tissue transplantation
- Biomechanics of bone and joints – hip, knee, ankle, foot, spine, shoulder, elbow and wrist
- Biomechanics of fracture fixation
- Tribology of joints
- Design and rationale of implants
- Factors associated with implant failure
- Biomaterials
- Principles of design of prostheses and orthotics
- Principles of orthotic bracing
- Basics of Genetics, cell biology, gene structure and genetic disorders

### Investigative modalities commonly used

- Commonly used blood tests – indications and clinical applications
- Musculoskeletal imaging modalities: radiographs, contrast studies, CT, MRI, ultrasound, radioisotope studies, SPECT and PET
- Assessment of bone mass and fracture risk – DEXA and Quantitative CT (QCT)
- Electrophysiological investigations

## Operating theatre and equipment

- Design of theatres – different types, laminar flow systems
- Tourniquet use and complications
- Diathermy use and precautions to be taken
- Sterilisation methods commonly employed
- Infection prevention and control
- Patient warming methods and rationale for each
- Skin preparation – principles and techniques

## Principles of data management and clinical governance

- Data analysis and statistics -- principles and applications
- Principles of epidemiology
- Design and conduct of clinical trials
- Quality improvement projects
- Clinical Audit -- principle's
- Principles of research
- Principles of evidence based practise

## Multimodal and multidisciplinary management of pain in Orthopaedic practise

## Normal gait and common gait deviations

## Infection

- Infection of bone, joint and soft tissue, including tuberculosis
- Principles of diagnosis and management of tuberculosis of musculoskeletal system
- Assessment, diagnosis and management of osteomyelitis both acute and chronic
- Diagnosis and management of necrotizing fasciitis
- Management of soft tissue infection of musculoskeletal system
- Hospital acquired infection
- Prosthetic joint infection – principles of management, especially total hip and knee arthroplasties
- Surgery in high risk and immune -- compromised patients – precautions and management

## Oncology

The candidate must demonstrate adequate knowledge of the following

- Common benign and malignant tumours -- presentation, investigation and management principles.
- Metastatic bone disease – principles of management: prophylactic and definitive fixation of pathological fractures
- Management principles of soft tissue sarcomas

The candidate must be able to describe tumour classes and their behaviour:

- Primary lesions
- Benign
- Latent
- Active
- Aggressive
- Malignant
- Metastatic lesions

The candidate must demonstrate adequate knowledge of most common primary benign and malignant bone tumour types: including presentation, radiologic characteristics and natural history, formulating appropriate investigation and management options

- Chondroid lesions
- Osteoid lesions
- Others, including but not limited to, unicameral bone cyst, hemangioma, histiocytosis, lipoma, eosinophilic granuloma, giant cell tumour, aneurysmal bone cyst, Ewing's sarcoma, adamantinoma, chordoma, hemangiopericytoma, osteoid osteoma, osteoblastoma

The candidate must demonstrate adequate knowledge of different primary benign and malignant soft tissue tumours: including presentation, radiologic characteristics and natural history, formulating appropriate investigation and management options

- Fibrous lesions
- Lipoid lesions
- Muscle lesions
- Vascular lesions
- Nerve lesions
- Others, including but not restricted to, myxoma, fibrosarcoma, malignant fibrous histiocytoma, pigmented villonodular synovitis, giant cell tumour of tendon sheath, myositis ossificans, tumoral calcinosis

The candidate must demonstrate a thorough knowledge of the principles of

- Bone biopsy techniques – needle and open
- Principles of management of metastatic disease including stabilisation
- Treatment of common benign tumours
- Treatment of common malignant tumours
- Staging of bone tumour
- Benign bone and soft tissue tumour excision
- Surgical management of malignant bone and soft tissue tumours, principles of limb salvage
- Chemotherapy for bone and soft tissue tumours
- Radiotherapy for bone and soft tissue tumours

The candidate must demonstrate knowledge to be able to assess the following:

- Size of the tumour and its relationship to fascia
- Neurovascular and articular involvement
- Lymphatic involvement
- Sites of metastatic potential for primary musculoskeletal tumours
- Organs systems likely to metastasise to the musculoskeletal system
- Tumour characteristics including issues specific to age and gender

# Section II -- Trauma

The candidate must demonstrate thorough clinical knowledge and competence in the management of orthopaedic trauma.

The candidate must be competent to:

- Prioritise injuries in patients with polytrauma and have knowledge of assessment of a polytraumatised patient
- Discuss the significance of pelvic fractures
- Explain the concepts of “damage control orthopaedics” vs “early total care”

The candidate must be able to recognise, assess and describe the principles of the management of:

- Isolated limb trauma
- Fractures, dislocations and fracture dislocation with appropriate splinting
- The multiply injured patient (including ATLS)
- Intra-articular fractures – principles of management and surgical techniques
- Pathological fractures – assessment and management
- Soft tissue injury including joint injuries
- Compartment syndrome – assessment and management
- Dysvascular limb – assessment and management
- Acute and chronic bone and soft tissue infection
- Management of open fractures

- Malunion and nonunion for fractures
- Late infection of bone and joints
- Segmental bone loss – management principles
- Geriatric fractures – management, multidisciplinary approach
- Stress fractures of different bones including femur, tibia, calcaneum and metatarsal bones.
- Adult respiratory distress syndrome
- Deep venous thrombosis
- Fat and pulmonary embolism
- Multiple organ system failure
- Chronic regional pain syndrome
- Non--accidental trauma

The candidate must be competent to:

- Initially manage fractures and dislocations with appropriate reduction and splinting
- Perform technical skills involved in ATLS protocol as outlined in the most common ATLS manual
- Manage compartment syndrome; perform compartment pressure monitoring and fasciotomy
- Manage acute and chronic infection
- Perform techniques of fracture fixation and soft tissue management including open fractures
- Perform intramedullary nailing of long bone fractures

- Perform open reduction and internal fixation of diaphyseal, metaphyseal and articular fractures and dislocations
- Perform techniques of external fixation for certain injuries, including intra-articular fractures with poor or compromised soft tissues (knee and ankle joints), pelvic fractures, distal radius fractures, knee dislocations
- Plan and surgically manage mal-union and non-union of bone

The candidate must demonstrate thorough knowledge of

- Compartment syndrome – measurement of compartment pressure and principles of fasciotomy
- Correction of mal-union
- Evacuation of haematoma
- Principles of bone graft harvesting – including sites of harvest
- Incision and drainage of abscess
- Irrigation and debridement native joint for infection
- Principles of application of skeletal traction
- Principles of application of external fixator frames with common indications for their use
- Removal of metalwork: external fixator, frames, k-wires or skeletal traction
- Neurovascular injuries – management principles
- Principles of arterial repair +/- grafting techniques
- Principles of nerve repair +/- grafting techniques
- Principles of tendon repair +/- grafting techniques
- Removal foreign body from skin / subcutaneous tissue
- Wound management principles and use of VAC therapy

- Types of skin flaps: Free flap, Full thickness skin graft, Muscle flap, Pedicle flap, Split skin graft and Transposition flap; Principles of Z plasty
- Principles of wound debridement and closure
- Different sports and chronic repetitive stress related injuries of the bones and joints such as knee ligament injuries, proximal hamstring tears, ankle ligament injuries, shoulder instability, cervical spine injuries etc.

The candidate must demonstrate knowledge of different types of amputations

- Forequarter amputation
- Above elbow amputation
- Below elbow amputation
- Finger amputation
- Hindquarter amputation
- Above knee amputation
- Through knee amputation
- Below knee amputation
- Through ankle amputation
- Hindfoot amputation
- Midfoot amputation
- Toe amputation

# Section III -- Adult Pathology – Spine, Hip, Knee, Foot & Ankle

## Spine

The candidate must have competence to perform a specific and complete physical exam for the entire spinal column and associated neurological structures, with an emphasis on the assessment of deformity and dysfunction for the individual patient. The candidate will demonstrate the ability to interpret contemporary spinal imaging.

The candidate must be competent to:

- Assess and manage acute spinal fracture and dislocation
- Assess and appropriately manage spinal trauma, including assessment of cervical spine injuries, organising necessary investigations and treatment options for different types of injuries
- Assess and manage spinal shock and cord syndromes
- Recognize emergency conditions (specifically acute cauda equina syndrome, acute neurological deterioration, acute traumatic spinal cord injury) with accurate prioritization
- Describe the presentation of cauda equina syndrome, organize imaging and arrange for appropriate treatment
- Recognize the significance of injury in high risk spinal conditions such as osteoporosis, inflammatory arthritis, DISH and ankylosing spondylitis

- Develop an effective differential diagnosis based on information gathered on history and physical examination
- Explain the anatomy and pathophysiology of acute and chronic soft tissue injury: Low back pain
- Discuss the indications for spine surgery
- Explain the risks, complications and expected outcomes of common spine procedures
- Describe anterior and posterior surgical approaches to the cervical, thoracic and lumbar spine
- Discuss the basic principles of spine arthrodesis including an understanding of the role of spinal instrumentation and stabilization, formulate an appropriate pre-operative plan for patients scheduled for surgery

The candidate must demonstrate knowledge of:

- Anatomy of spine and spinal cord including intervertebral discs
- Biomechanics of spine
- Different spinal cord injuries
- Complete transection of the dorso-lumbar cord
- Paraplegia -- conservative management and supportive care.
- Management of spinal tuberculosis
- Management principles of spinal osteomyelitis
- Assessment and management of spinal epidural abscess and discitis
- Assessment and management of disc herniation – cervical, thoracic and lumbo-sacral
- Principles of management of cervical myelopathy
- Different types of fractures of the vertebrae and management
- Assessment and management of spinal stenosis
- Assessment and management of spondylolysis and spondylolisthesis
- Assessment and management of spina bifida

- Assessment and management of syringomyelia
- Assessment and management of radiculopathy
- Crush fracture of the vertebrae with peripheral paralysis; diagnosis and management of spinal instability
- Assessment of acute low back pain – management principles with emphasis on investigation and rehabilitation, particularly for acute onset cord damage – interpretation of radiographs and scans; thorough assessment for cauda equina syndrome
- Use of spinal brace and mechanics
- Principles of spinal rehabilitation
- Patient positioning, prepping, and draping for anterior and posterior spine surgery
- Application of external fixation devices (tongs, halos)
- Bone graft harvesting techniques
- Posterior spinal approaches
- Management of common post-operative complications
- Performing a primary lumbar discectomy for relief of radicular symptoms
- Performing a primary cervical, thoracic, lumbar laminectomy either for urgent or elective decompression of central or peripheral neurologic structures
- Performing a primary posterior instrumented lumbar fusion
- Closed reduction techniques in spinal fracture & dislocations
- Principles of managing spinal deformities including scoliosis and kyphosis

## Hip And Knee -

The candidate must possess knowledge to:

- Advise patients regarding the non-operative management of hip and knee arthritis; including indications, complications and effectiveness of such treatment
- Summarize the indications, results and complications of surgery for hip and knee arthritis with respect to age, gender and activity level
- Describe the principles of hip and knee reconstructive surgery for arthritis including osteotomy, arthrodesis and joint arthroplasty
- Principles of hip preservation surgery and resurfacing. Management of femoro acetabular impingement and avascular necrosis
- Explain the recovery and rehabilitation following hip and knee arthroplasty
- Discuss the unique medical problems of the geriatric population

The candidate must demonstrate detailed knowledge of the following areas:

- Surgical anatomy and pathophysiology of hip and knee
- Common surgical approaches used around hip and knee
- Primary total joint arthroplasty – management principles
- Complicated primary joint arthroplasty (e.g. dysplastic hip, valgus knee)
- Revision hip and knee replacement surgery
  - Selection of appropriate implants – design and current evidence Implants -- various factors affecting implant survival and function, including design, biomaterials, fixation and wear properties
- Describe the details of hip and knee reconstructive surgery for arthritis including osteotomy, arthrodesis and joint replacement

- Evidence from different joint registries – UK, Sweden and Australia
- Implant fixation techniques – cemented and uncemented

The candidate will be able to explain the anatomy and pathophysiology of acute and chronic soft tissue injury:

- Joint instability
- Meniscal injuries of the knee
- Patellofemoral disorders

The candidate will demonstrate the ability to assess:

- Complex/revision hip and knee arthroplasty
- Lower extremity malalignment
- Painful or failed hip and knee arthroplasty, particularly with respect to infection
- Complications associated with hip and knee reconstructive surgery

The candidate must possess knowledge and competence for the following conditions

- Pre-operative planning of primary and simple revision hip and knee arthroplasty
- Performing total joint arthroplasty of hip and knee
- Diagnostic knee arthroscopy
- Uses of operative knee arthroscopy – meniscectomy, chondroplasty and microfracture
- Anterior cruciate ligament reconstruction
- Patella malalignment and realignment procedures
- Lower extremity realignment – osteotomy of tibia and femur
- Joint injuries

- Tendon ruptures

## Foot and Ankle

The candidate must possess knowledge to:

- Explain normal and abnormal gait
- Identify the presence of ulcers, and feet at high risk for ulceration
- Describe the non-operative management of common foot and ankle pathology
- Assess and provide differential diagnosis for, and management plan for common foot and ankle pathologies

The candidate should be competent to assess:

- Normal and abnormal gait
- Deformities of forefoot, midfoot, hindfoot and ankle
- Feet at high risk for ulceration, and the presence of ulcers
- Foot and ankle fractures and dislocations

The candidate must demonstrate knowledge of:

- Ankle arthroscopy
- Local anaesthetic blocks around ankle and foot
- Surgical approaches for hindfoot, midfoot, forefoot and ankle
- Diagnostic and therapeutic injections of the foot and ankle joints
- Management of diabetic/Charcot foot

- Management of ischemic/gangrenous foot
- Management of foot and ankle fractures
- Treatment of arthritis involving ankle, subtalar, midfoot and forefoot joints
- Ankle ligament reconstruction in acute and chronic setting
- Treatment and management of foot and ankle tendinopathies
- Achilles tendon injury – non operative and operative management
- Management of neuromuscular foot disorders, tendon transfers and reconstructive surgery
- Excision of ingrowing toe nail

# Section IV -- Upper Limb and Paediatric Orthopaedics

## Upper Limb - Shoulder and Elbow

The candidate must be able to demonstrate a thorough knowledge of the following including ability to recognize and describe:

- Upper limb fractures and dislocations
- Degenerative, overuse and traumatic tendon injuries
- Principles and indications for joint reconstruction of the upper limb
- Peripheral nerve injuries and entrapments Benign neoplasms, including ganglions, and malignant neoplasms
- Principles and indications for arthroscopy in the shoulder and elbow
- Complex periarticular fractures and fracture--dislocations

The candidate must demonstrate knowledge of the anatomy and pathophysiology of acute and chronic soft tissue injury:

- Rotator cuff and elbow tendinopathy

The candidate must demonstrate awareness of:

- Indications for arthroscopy in the shoulder and elbow
- Diagnostic arthroscopy of the shoulder
- Operative shoulder arthroscopy
- Shoulder reconstruction for instability
- Surgical management of rotator cuff pathology
- Principles of amputations and arthrodesis around shoulder and elbow
- Unique principles of treatment of skeletal metastases around shoulder and elbow

The candidate should be competent to assess the following conditions:

- Multidirectional shoulder instability
- Failed shoulder reconstruction
- Chronic instability of the elbow
- Upper limb fractures and dislocations
- Complex periarticular fractures and fracture--dislocations
- Degenerative, overuse and traumatic tendon injuries
- Peripheral nerve injuries, and entrapments
- Complex regional pain syndromes – assessment and management
- Bone and soft tissue infections – assessment and management
- Compartment syndromes – assessment and management
- Brachial plexus injuries and principles of tendon transfers

The candidate should be competent in:

- Splinting of upper limb
- Diagnostic and therapeutic injections of the upper limb
- Closed and open reduction techniques for common upper limb fractures and dislocations
- Management of intra-articular and peri-prosthetic fractures of the upper limb
- Common surgical exposures to the upper limb
- Principles of primary shoulder hemiarthroplasty
- Principles of arthroplasty of radial head
- Treatment of joint contractures
- Management of adhesive capsulitis
- Principles of open/arthroscopic shoulder stabilization
- Acromioclavicular instability -- acute and chronic
- Tendon rupture, repair and reconstruction -- rotator cuff and distal biceps
- Surgical management of compartment syndromes and nerve entrapment syndromes

## Upper Limb : Wrist and Hand

The candidate must demonstrate knowledge and understanding of

- Anatomy of the wrist and hand including biomechanics
- Surgical approaches in the hand and wrist
- Biomechanics of hand and wrist arthroplasty
- Radiological investigations to assess the hand and wrist
- The painful hand and wrist
- Dupuytren's disease – assessment and management
- Inflammatory, degenerative and infective conditions of the hand and wrist
- Developmental deformity around the hand and wrist
- Principles of management of deformities around hand and wrist
- Neurophysiology of the hand and wrist
- Diagnostic and therapeutic injections around wrist and hand
- Principles of arthroscopy of wrist
- Fractures around wrist and hand

The candidate must be competent to perform a thorough examination of the hand and wrist including taking a history, performing the necessary clinical tests and organising relevant investigations.

The candidate must demonstrate a thorough knowledge of:

- Entrapment neuropathies – assessment, investigation and management
- The rheumatoid hand and wrist – principles of management
- The congenital hand conditions
- Dupuytren's disease – assessment and management options – operative
- Rehabilitation of the hand and wrist
- Arthroscopy of the hand and wrist
- Arthrodesis in hand and wrist
- Excision arthroplasty in the hand and wrist
- Prosthetic replacement in the hand and wrist
- Orthoses commonly used in hand and wrist conditions
- Interposition arthroplasty – CMC, distal radioulnar joint

The candidate must demonstrate thorough awareness of the following wrist and hand trauma conditions

- Fracture distal radius: closed non-operative, external fixation, MUA & percutaneous wires, ORIF and Application of spanning external fixator
- Carpal fractures / dislocations -- management options
- Replantation of hand and revascularisation of hand
- Scapho--lunate ligament injuries
- Scaphoid fracture management including ORIF +/- grafting techniques
- Metacarpal fracture / dislocation
- Fingertip injuries – principles of terminalisation
- Nail bed injuries and repair

- Hand compartment syndrome – assessment and fasciotomy
- Neurovascular injuries around hand and wrist
- Principles of extensor and flexor tendon repair: rehabilitation principles
- High--pressure injection injuries
- Infection of hand including drainage (not tendon sheath)
- Tendon sheath Infection – management principles

The candidate should demonstrate knowledge of the following procedures

- Arthrodesis wrist
- Arthroscopy wrist
- Carpal tunnel decompression
- De Quervain's decompression
- Decompression / synovectomy tendons
- Denervation wrist
- Excision distal ulna
- Ganglion excision at wrist
- Proximal row carpectomy
- Radial shortening
- Surgery for chronic carpal instability
- Open and arthroscopic surgical management of TFCC tear
- Surgical management of DRUJ and carpal instabilities
- Dupuytren's contracture and surgical management
- Finger malunion correction or other deformity

- Tenosynovectomy
- Trapezium excision or replacement
- Trigger finger release
- Trigger thumb release

# Paediatric Orthopaedics

The candidate must demonstrate ability to:

- Describe normal musculoskeletal anatomy, growth, and development in the child including common angular and torsional variants
- Describe the anatomy and pathologic basis of the disorders leading to a limp in a child
- Explain the mechanisms, patterns, assessment, management, and potential complications related to simple and complex paediatric fractures and dislocations
- Explain the mechanisms, patterns, assessment, management, and potential complications related to osteomyelitis and septic arthritis
- Discuss the anatomy, pathology, assessment, and management of complex hip disorders
- Assess and manage simple fractures, including appropriate analgesia/anaesthesia techniques
- Assess and manage complex paediatric fractures including: Physeal injuries, Open fractures, Multiple fractures in trauma, Compartment syndrome, and neurovascular compromise

The candidate must demonstrate a thorough knowledge of the following conditions, including the ability to assess, perform appropriate investigations and be well aware of the management principles:

- Non--accidental trauma
- Pathological fractures
- Paediatric neoplasia

- Medical imaging and other diagnostic tools specific to the paediatric population
- Complex paediatric fractures and dislocations
- Complex hip disorders
- The limping child
- Hips of infants and children including Barlow and Ortolani maneuvers
- Limb length inequalities
- Scoliosis – principles of management
- Slipped capital femoral epiphysis
- Perthes' disease
- Developmental dysplasia of the hip – diagnosis and management at different age groups and the use of ultrasound
- CTEV – assessment and management; Ponseti technique and use of adjunct procedures; management of congenital vertical talus and tarsal coalition
- Cerebral palsy – assessment, principles of management and rehabilitation
- Spinal dysraphism, meningomyelocoele and other neuromuscular disorders
- Pes planus, pes cavus, forefoot deformities
- Congenital hand abnormalities
- Osteogenesis imperfecta
- Management of different paediatric fractures and dislocations
- Principles of management of different physeal injuries

The candidate must demonstrate adequate knowledge of the following procedures including preoperative assessment, organising necessary investigation and surgical principles.

- Percutaneous pinning of fractures

- Skin and skeletal traction
- Pavlik harness
- Biopsy for suspected paediatric neoplasia
- Apply paediatric casts, including a hip spica cast
- Develop a non-operative treatment of children's clubfoot
- Operative management of septic arthritis including arthrogram and arthrotomy – hip, knee and ankle in particular
- Management of Osteomyelitis
- Slipped capital femoral epiphysis – surgical management
- Manage simple and complex paediatric fractures including: Physeal injuries, Compound fractures, Multiple trauma
- Awareness of the speed of development of infection in infants and of apparently “silent” osteomyelitis, septic arthritis and meningitis.

# Useful resources

## Recommended Textbooks

1. Millers Review of Orthopaedics
2. Surgical Exposures in Orthopaedics. The anatomic approach. Hoppenfield
3. Moore clinically Oriented Anatomy (Keith Moore)
4. Mercer's Textbook of Orthopaedics
5. Paediatric Orthopaedic Secrets (Lynn Staheli)
6. Passport for the Orthopedic Boards and FRCS Examination: Cyril Mauffrey, David J. Hak
7. Current Progress in Orthopedics1: Ashok Johari, Keith DK Luk, James P Waddell
8. Handbook of fractures (Koval & Zuckerman)
9. Basic Science in Orthopaedics Stanmore Guide (Manoj Ramachandran)
10. JBJS (Br) Exam Corner Section (V Khanduja)

## Exam preparation resources

1. Post graduate Orthopaedics
2. FRCS Tr & Orth MCQs (V Khanduja)
3. FRCS Tr & Orth MCQs (Kes Sri--Ram)
4. FRCS Tr & Orth MCQs (S Dawson--Bowling)
5. FRCS Tr & Orth Viva (Oxford guide)

## **Online resources**

1. Orthobullets
2. Orthopaedic Hyperguide
3. Wheelless textbook of Orthopaedic

## **Reference**

1. Campbell's Operative Orthopaedics
2. Rockwood & Green's Fractures in Adults
3. Lovell and Winter's Pediatric Orthopaedics (Weinstein and Flynn)
4. Tachdjian's Pediatric Orthopaedics (John Herring)

## **Journals**

1. International Orthopaedics
2. Bone and Joint Journal – Specialty Update
3. Orthopaedic & Trauma
4. JAAOS review articles