

Core knowledge for orthopaedics resident of RCOST

| Topic | Level of knowledge | R1 | R2 | R3 | R4 | Fellow |
|--------------------------------|--------------------|---|--|---|---|---|
| 1. Basic science and knowledge | L1 | <ol style="list-style-type: none"> Anatomy of hip and knee Physical examination | <ol style="list-style-type: none"> Pre and post-natal development Surgical approach and related structures | <ol style="list-style-type: none"> Bone graft and bone substitute Identify the rating and outcome measures in common use for hip and knee diseases Articular cartilage and its diseases | <ol style="list-style-type: none"> Expansile surgical approach for complex surgery | |
| | L2 | <ol style="list-style-type: none"> History taking | <ol style="list-style-type: none"> Physical examination | | <ol style="list-style-type: none"> Use of rating and outcome measures commonly use for hip and knee diseases | <ol style="list-style-type: none"> Expansile surgical approach for complex surgery |
| | L3 | | | <ol style="list-style-type: none"> History taking and physical examination | | <ol style="list-style-type: none"> Use of rating and outcome measures commonly use for hip and knee diseases |

| Topic | Level of knowledge | R1 | R2 | R3 | R4 | Fellow |
|-----------------|--------------------|----|--|--|---|-------------------------|
| 2. Biomaterials | L1 | | 1. Basic properties of biomaterials eg. Metal, cement, polyethylene etc. | 1. Tribology 2. Response to wear debris 3. Wear assessment | 1. Engineering techniques for implant design and evaluation 2. Fixation by cement 3. Fixation by biologic fixation (ingrowth, ongrowth) 4. Bone remodeling around implants | 1. Mechanism of Failure |
| | L2 | | | | | |
| | L3 | | | | | |

| Topic | Level of knowledge | R1 | R2 | R3 | R4 | Fellow |
|--|--------------------|----|--|--|--|--|
| 3. Evaluation of Diseases/Conditions of Knee Joints | L1 | | 1. Osteoarthritis and allies diseases 2. Septic arthritis of the knee 3. Osteonecrosis, neuromuscular diseases 4. Metabolic bone diseases affect knee joint | 1. Perioperative considerations | | |
| | L2 | | | 1. Radiographic evaluation 2. Radionuclide imaging evaluation 3. Laboratory investigation and evaluation 4. Aspiration | | |
| | L3 | | | | 1. Radiographic evaluation 2. Radionuclide imaging evaluation 3. Laboratory investigation and evaluation 4. Aspiration | 1. Radiographic evaluation 2. Radionuclide imaging evaluation 3. Laboratory investigation and evaluation 4. Aspiration |

| Topic | Level of knowledge | R1 | R2 | R3 | R4 | Fellow |
|--------------------------------------|--------------------|----|----|---|---|---|
| 4. Alternatives to knee arthroplasty | L1 | | | <ol style="list-style-type: none"> 1. Choice of management of knee disease with non-arthroplasty procedure 2. Principle of arthrodesis and technique 3. Resection arthroplasty | <ol style="list-style-type: none"> 1. Principle of osteotomy and surgical techniques | |
| | L2 | | | | | <ol style="list-style-type: none"> 1. Osteotomy around the knee 2. Simple arthroscopic knee procedure |
| | L3 | | | | | |

| Topic | Level of knowledge | R1 | R2 | R3 | R4 | Fellow |
|----------------------|--------------------|----|--|---|---|--|
| 5. Knee arthroplasty | L1 | | 1. Preoperative medical evaluation 2. Anesthesia 3. Blood conservation | 1. Indication and contraindication for knee arthroplasty (total and uni) 2. Prosthesis design and survival 3. Complication after knee arthroplasty , prevention and evaluation 4. Principle and technique of knee arthroplasty | 1. Principle of management of bone loss 2. Principle of revision total knee arthroplasty | |
| | L2 | | | 1. pre- and postoperative management 2. Outcome evaluation of knee arthroplasty | 1. Simple primary total knee arthroplasty | 1. Revision knee arthroplasty |
| | L3 | | | | 1. pre- and postoperative management 2. Outcome evaluation of knee arthroplasty | 1.Primary total or uni knee arthroplasty |

| Topic | Level of knowledge | R1 | R2 | R3 | R4 | Fellow |
|---|--------------------|----|---|---|---|---|
| 6. Evaluation of Diseases/Conditions of the Hip | L1 | | 1. Osteoarthritis and allies diseases 2. Septic arthritis of the hip 3. Osteonecrosis, neuromuscular diseases | 1. Systemic diseases resulting hip patheology 2. Sequelae of pediatric hip disease | | |
| | L2 | | | 1. Radiographic evaluation 2. Radionuclide imaging evaluation 3. Laboratory investigation and evaluation 4. Aspiration | | |
| | L3 | | | | 1. Radiographic evaluation 2. Radionuclide imaging evaluation 3. Laboratory investigation and evaluation 4. Aspiration | 1. Radiographic evaluation 2. Radionuclide imaging evaluation 3. Laboratory investigation and evaluation 4. Aspiration |

| Topic | Level of knowledge | R1 | R2 | R3 | R4 | Fellow |
|-------------------------------------|--------------------|----|----|--|---|-----------------------------|
| 7. Alternatives to hip arthroplasty | L1 | | | 1. Choice of management of hip disease with non-arthroplasty procedure 2. Principle of arthrodesis and technique 3. Resection arthroplasty | 1. Principle of osteotomy and surgical techniques | |
| | L2 | | | | | 1. Osteotomy around the hip |
| | L3 | | | | | |

| Topic | Level of knowledge | R1 | R2 | R3 | R4 | Fellow |
|---------------------|--------------------|----|--|--|--|--|
| 8. Hip arthroplasty | L1 | | <ol style="list-style-type: none"> 1. Preoperative medical evaluation 2. Anesthesia 3. Blood conservation | <ol style="list-style-type: none"> 1. Indication and contraindication for hip arthroplasty (total and partial) 2. Prosthesis design and survival 3. Complication after hip arthroplasty , prevention and evaluation 4. Principle and technique of hip arthroplasty | <ol style="list-style-type: none"> 1. Principle of management of bone loss 2. Principle of revision total hip arthroplasty | |
| | L2 | | | <ol style="list-style-type: none"> 1. pre- and postoperative management 2. Outcome evaluation of knee arthroplasty | <ol style="list-style-type: none"> 1. Simple primary total hip arthroplasty 2. Partial hip arthroplasty | <ol style="list-style-type: none"> 1. Revision total hip arthroplasty |
| | L3 | | | | <ol style="list-style-type: none"> 1. pre- and postoperative management 2. Outcome evaluation of knee arthroplasty | <ol style="list-style-type: none"> 1. Primary total hip arthroplasty 2. Partial hip arthroplasty |

| Topic | Level of knowledge | R1 | R2 | R3 | R4 | Fellow |
|------------------------------|--------------------|----|----|----|--|---------------------------------------|
| 9. Computer assisted surgery | L1 | | | | 1. Principle of CAOS hip and knee arthroplasty | 1. System of CAOS and their work flow |
| | L2 | | | | | 1. CAS TKR or THR |
| | L3 | | | | | |