

# Contents

## Section 1: Upper Limbs

<b>1. PECTORAL REGION AND AXILLA</b>	<b>5</b>
• <i>Incisions</i> 5	
• <i>Cutaneous Nerves</i> 6	
• <i>Female Breast</i> 6	
• <i>Anterior Wall of Axilla</i> 6	
• <i>Axillary Lymph Nodes</i> 8	
• <i>Axillary Artery and its Branches</i> 8	
• <i>Brachial Plexus and its Branches</i> 9	
• <i>Posterior Wall of Axilla</i> 9	
• <i>Lateral Wall of Axilla</i> 10	
• <i>Medial Wall of Axilla</i> 10	
<b>Take Home Message</b> 11	
• <i>Pectoral Region and Axilla</i> 13	
• <i>Mammary Gland</i> 13	
<b>Objectives for Pectoral Region and Axilla</b> 13	
<b>2. FRONT OF ARM AND CUBITAL FOSSA</b>	<b>14</b>
• <i>Incisions</i> 14	
• <i>Superficial Veins</i> 14	
• <i>Cutaneous Nerves</i> 15	
• <i>Muscles of Front of Arm</i> 16	
• <i>Median and Ulnar Nerves</i> 16	
• <i>Brachial Artery</i> 17	
• <i>Cubital Fossa</i> 17	
<b>Take Home Message</b> 18	
<b>Objectives for Front of Arm and Cubital Fossa</b> 19	
<b>3. BACK OF TRUNK, SCAPULAR REGION AND BACK OF ARM</b>	<b>20</b>
• <i>Incisions</i> 20	
• <i>Muscles of Back of Trunk—1st layer</i> 21	
• <i>Muscles of Back of Trunk—2nd layer</i> 22	
• <i>Deltoid</i> 23	
• <i>Scapular Region</i> 24	
• <i>Intermuscular Spaces Around the Scapula</i> 25	
• <i>Back of Arm</i> 26	
<b>Take Home Message</b> 27	
<b>Objectives for Back of Trunk, Scapular Region and Back of Arm</b> 28	

<b>4. BACK OF FOREARM, HAND AND JOINTS OF SHOULDER GIRDLE</b>	<b>29</b>
<ul style="list-style-type: none"> <li>• <i>Back of Forearm and Hand</i> 29</li> <li>• <i>Back of Forearm (Superficial)</i> 30</li> <li>• <i>Back of Forearm (Deep)</i> 30</li> <li>• <i>Extensor Retinaculum</i> 32</li> <li>• <i>Joints of Shoulder Girdle</i> 33</li> </ul>	
<b>Take Home Message</b> 35	
<ul style="list-style-type: none"> <li>• <i>Back of Forearm and Hand</i> 37</li> <li>• <i>Joints of Shoulder Girdle</i> 37</li> </ul>	
<b>Objectives for Back of Forearm, Hand and Joints of Shoulder Girdle</b> 37	
<b>5. FRONT OF FOREARM AND HAND</b>	<b>39</b>
<ul style="list-style-type: none"> <li>• <i>Incisions</i> 39</li> <li>• <i>Cutaneous Nerves and Veins</i> 39</li> <li>• <i>Flexor Muscles of Forearm</i> 40</li> <li>• <i>Superficial Structures of Palm</i> 42</li> <li>• <i>Thenar and Hypothenar Muscles</i> 43</li> <li>• <i>Deep Structures of Forearm</i> 44</li> <li>• <i>Deep Structures of Palm</i> 46</li> </ul>	
<b>Take Home Message</b> 48	
<ul style="list-style-type: none"> <li>• <i>Muscles</i> 48</li> <li>• <i>Nerves</i> 48</li> <li>• <i>Arteries</i> 49</li> </ul>	
<b>Objectives for Front of Forearm and Hand</b> 50	
<b>6. JOINTS OF FREE UPPER LIMB</b>	<b>51</b>
<ul style="list-style-type: none"> <li>• <i>Elbow Joint and Proximal Radioulnar Joints</i> 51</li> <li>• <i>Middle Radioulnar Joint</i> 53</li> <li>• <i>Distal Radioulnar and Wrist Joints</i> 53</li> <li>• <i>Intercarpal, Midcarpal, Carpometacarpal, Metacarpophalangeal and Interphalangeal Joints</i> 54</li> </ul>	
<b>Take Home Message</b> 55	
<b>Objectives for Joints of Free Upper Limb</b> 56	
<ul style="list-style-type: none"> <li>• <i>Elbow Joint</i> 56</li> <li>• <i>Radioulnar Joints</i> 56</li> <li>• <i>Wrist and Midcarpal Joints</i> 56</li> <li>• <i>Small Joints of the Hand</i> 56</li> </ul>	
<b>Additional Objectives for Upper Limb</b> 57	
<ul style="list-style-type: none"> <li>• <i>Nerves of the Upper Limb</i> 57</li> <li>• <i>Blood Vessels and Lymphatics of Upper Limb</i> 57</li> <li>• <i>Skeletal Framework of the Upper Limb</i> 57</li> <li>• <i>Joints of Upper Limb</i> 57</li> </ul>	

## Section 2: Lower Limb

<b>7. ANTERIOR AND MEDIAL ASPECTS OF THE THIGH</b>	<b>63</b>
<ul style="list-style-type: none"> <li>• <i>Incisions</i> 63</li> <li>• <i>Superficial Veins</i> 63</li> <li>• <i>Inguinal Lymph Nodes</i> 64</li> </ul>	

<ul style="list-style-type: none"> <li>• <i>Cutaneous Nerves</i> 64</li> <li>• <i>Fascia</i> 64</li> <li>• <i>Femoral Triangle</i> 65</li> <li>• <i>Femoral Artery</i> 66</li> <li>• <i>Adductor Canal</i> 66</li> <li>• <i>Quadriceps Femoris</i> 67</li> <li>• <i>Adductor Compartment</i> 68</li> </ul>	
<b>Take Home Message</b> 70	
<b>Objectives for Anterior and Medial Aspects of the Thigh</b> 72	
<b>8. GLUTEAL REGION AND POSTERIOR ASPECT OF THE THIGH</b>	<b>73</b>
<ul style="list-style-type: none"> <li>• <i>Incisions</i> 73</li> <li>• <i>Cutaneous Nerves</i> 74</li> <li>• <i>Structures Under Cover of Gluteus Maximus</i> 75</li> <li>• <i>Back of Thigh</i> 78</li> </ul>	
<b>Take Home Message</b> 79	
<b>Objectives for Gluteal Region and Posterior Aspect of the Thigh</b> 81	
<b>9. POPLITEAL FOSSA, BACK OF THE LEG AND HIP JOINT</b>	<b>82</b>
<ul style="list-style-type: none"> <li>• <i>Incisions</i> 82</li> <li>• <i>Cutaneous Nerves</i> 82</li> <li>• <i>Popliteal Region/Fossa</i> 83</li> <li>• <i>Back of Leg</i> 84</li> <li>• <i>Flexor Retinaculum</i> 86</li> <li>• <i>Hip Joint</i> 87</li> </ul>	
<b>Take Home Message</b> 89	
<ul style="list-style-type: none"> <li>• <i>Popliteal Fossa and Back of Leg</i> 91</li> <li>• <i>Hip Joint</i> 91</li> </ul>	
<b>Objectives for Popliteal Fossa, Back of the Leg and Hip Joint</b> 91	
<b>10. ANTERIOR AND LATERAL ASPECTS OF THE LEG, DORSUM OF THE FOOT AND KNEE JOINT</b>	<b>92</b>
<ul style="list-style-type: none"> <li>• <i>Incisions</i> 92</li> <li>• <i>Superficial Veins</i> 92</li> <li>• <i>Cutaneous Nerves</i> 92</li> <li>• <i>Retinacula Around the Ankle</i> 94</li> <li>• <i>Lateral (Peroneal) Compartment of Leg</i> 94</li> <li>• <i>Anterior (Extensor) Compartment of Leg and Dorsum of Foot</i> 95</li> <li>• <i>Knee Joint</i> 97</li> </ul>	
<b>Take Home Message</b> 99	
<b>Objectives for Anterior and Lateral Aspects of the Leg, Dorsum of the Foot and Knee Joint</b> 100	
<ul style="list-style-type: none"> <li>• <i>Knee Joint</i> 100</li> </ul>	
<b>11. SOLE OF FOOT</b>	<b>101</b>
<ul style="list-style-type: none"> <li>• <i>Incisions</i> 101</li> <li>• <i>Cutaneous Nerves and Vessels</i> 102</li> <li>• <i>Superficial Structures of the Sole of Foot</i> 103</li> <li>• <i>Deep structures of the Sole of Foot</i> 105</li> </ul>	
<b>Take Home Message</b> 107	
<b>Objectives for Sole of Foot</b> 108	

## 12. TIBIOFIBULAR JOINT, ANKLE JOINT AND JOINTS OF THE FOOT

109

- *Tibiofibular Joint* 109
- *Ankle Joint* 109
- *Arches of the Foot* 109
- *Joints of the Foot* 111
- *Subtalar Joint* 111
- *Calcaneocuboid Joint* 111
- *Transverse Tarsal Joint (Midtarsal Joint)* 111

**Take Home Message** 113

**Objectives for Ankle Joint and Joints of Foot** 114

- *Ankle Joint* 114
- *Joints of Foot* 114

**Additional Objectives of Lower Limb** 115

## Section 3: Abdomen

### 13. ANTERIOR ABDOMINAL WALL AND EXTERNAL GENITALIA

121

- *Anterior Abdominal Wall* 121
- *Superficial Fascia of Anterior Abdominal Wall* 122
- *Cutaneous Nerves* 123
- *Muscles of Anterior Abdominal Wall* 124
- *Rectus Sheath* 125
- *Inguinal Canal* 126
- *Spermatic Cord* 127
- *Male External Genitalia* 128
- *Epididymis and Testis* 129
- *Female External Genitalia* 130

**Take Home Message** 131

**Objectives for Anterior Abdominal Wall and External Genitalia** 133

- *Anterior Abdominal Wall* 133
- *Inguinal Canal* 133
- *External Genitalia* 133

### 14. ABDOMINAL VISCERA AND PERITONEUM

134

- *Peritoneum* 134
- *Regions of Abdomen* 135
- *Examination of Abdominal Viscera in situ* 136
- *Greater Omentum* 137
- *Lesser Omentum* 137
- *Epiploic foramen* 138
- *Lesser Sac* 138
- *Celiac Axis* 140
- *Stomach* 141
- *Small Intestine* 142
- *Large Intestine* 143
- *Superior Mesenteric Artery* 145
- *Inferior Mesenteric Artery* 146
- *Lymphatics and Autonomic Plexus* 146

<b>Take Home Message</b>	<b>147</b>	
<b>Objectives for Abdominal Viscera and Peritoneum</b>	<b>149</b>	
<b>15. LIVER, PANCREAS, DUODENUM AND SPLEEN</b>		<b>150</b>
• <i>Liver</i>	150	
• <i>Spleen</i>	153	
• <i>Duodenum</i>	153	
• <i>Pancreas</i>	153	
• <i>Bile Duct and Pancreatic Duct</i>	154	
<b>Take Home Message</b>	<b>157</b>	
<b>Objectives for Liver, Pancreas, Duodenum and Spleen</b>	<b>159</b>	
<b>16. POSTERIOR ABDOMINAL WALL</b>		<b>160</b>
• <i>Kidneys</i>	160	
• <i>Ureter</i>	163	
• <i>Ganglia and Nerves Related to Autonomic Plexus</i>	164	
• <i>Abdominal Aorta</i>	165	
• <i>Inferior Vena Cava</i>	165	
• <i>Diaphragm</i>	166	
• <i>Muscles of Posterior Abdominal Wall</i>	167	
• <i>Lumbar Plexus</i>	167	
• <i>Iliac Vessels</i>	168	
• <i>Cisterna Chyli and Azygos Vein</i>	168	
<b>Take Home Message</b>	<b>169</b>	
<b>Objectives for Posterior abdominal wall</b>	<b>170</b>	
• <i>Kidneys, Ureters and Suprarenal Glands</i>	170	
• <i>Vessels and Nerves of Abdomen</i>	170	
• <i>Diaphragm, Muscles of the Posterior Abdominal Wall and Lumbar Plexus</i>	170	
<b>Section 4: Pelvis and Perineum</b>		
<b>17. PELVIC VISCERA</b>		<b>173</b>
• <i>Disposition of Peritoneum in the Pelvis</i>	173	
• <i>Rectum</i>	175	
• <i>Uterus and its Adnexae</i>	176	
• <i>Fallopian Tube</i>	176	
• <i>Ovary</i>	177	
• <i>Ligaments of Uterus</i>	178	
• <i>Vagina</i>	178	
• <i>Urinary Bladder</i>	179	
• <i>Seminal Vesicle and Prostate</i>	180	
<b>Take Home Message</b>	<b>182</b>	
<b>Objectives for Pelvic Viscera</b>	<b>183</b>	
<b>18. PELVIC WALL</b>		<b>184</b>
• <i>Blood Vessels</i>	184	
• <i>Nerves (Sacral Plexus)</i>	185	
• <i>Muscles</i>	186	

**Take Home Message 188**

**Objectives for Pelvic Wall 189**

- *Pelvic Blood Vessels and Nerves* 189
- *Pelvic Musculature* 189

**19. PERINEUM**

**190**

- *Incisions* 190
- *Anal Triangle* 190
- *Ischiorectal Fossa* 192
- *Urogenital Triangle* 193
- *Deep Dissection of Perineum in Both Sexes* 195

**Take Home Message 196**

**Objectives for Perineum 197**

**Additional Objectives for Abdomen and Pelvis 198**

- *Peritoneal Reflections* 198
- *Abdominal Viscera* 198
- *Nerves of Abdomen* 198
- *Blood Vessels and Lymphatics* 199
- *Skeletal Framework of Abdomen* 199

## Section 5: Thorax

**20. THORACIC WALL AND LUNGS**

**205**

- *Intercostal Muscles* 205
- *Intercostal Vessels and Nerves* 206
- *Parietal Pleura and its Reflections* 208
- *Removal of Lung* 209
- *Left Lung* 209
- *Right Lung* 210
- *Intrapulmonary Bronchi and Bronchopulmonary Segments* 211

**Take Home Message 212**

**Objectives for Pleurae and Lungs 213**

**21. SUPERIOR AND MIDDLE MEDIASTINUM**

**214**

- *Mediastinum and Its Subdivisions* 214
- *Superior Mediastinum* 215
- *External Features of Heart* 217
- *Blood Supply of Heart* 218
- *Internal Features of Heart* 219
- *Great Vessels of Heart* 222

**Take Home Message 223**

**Objectives for Superior and Middle Mediastinum 224**

- *Heart* 224

**22. SUPERIOR AND POSTERIOR MEDIASTINUM AND JOINTS OF THORAX**

**225**

- *Superior and Posterior Mediastinum* 225
- *Joints of Thorax* 228
- *Movements of the Thoracic Cage During Respiration* 229

**Take Home Message 229**

- *Movements of the Thoracic Cage during Respiration*

**Objectives for Superior and Posterior Mediastinum 231****Additional Objectives for Thorax 232**

- *Chest Wall 232*
- *Thoracic Viscera 232*

## Section 6: Head and Neck

<b>23. POSTERIOR TRIANGLE OF THE NECK</b> <ul style="list-style-type: none"> <li>• <i>Incisions 235</i></li> <li>• <i>Superficial Structures 235</i></li> <li>• <i>Posterior Triangle 238</i></li> <li>• <i>Subclavian Vessels 240</i></li> </ul> <i>Take Home Message 241</i> <i>Objectives for Posterior Triangle of the Neck 242</i>	<b>235</b>
<b>24. ANTERIOR TRIANGLE OF THE NECK</b> <ul style="list-style-type: none"> <li>• <i>Incisions 243</i></li> <li>• <i>Superficial Structures 243</i></li> <li>• <i>Sternocleidomastoid Muscle 244</i></li> <li>• <i>Midline Structures of the Neck 244</i></li> <li>• <i>Infrahyoid Muscles 245</i></li> <li>• <i>Thyroid Gland 246</i></li> <li>• <i>Trachea and Esophagus (Cervical Part) 247</i></li> <li>• <i>Carotid Sheath 247</i></li> </ul> <i>Take Home Message 249</i> <i>Objectives for Anterior Triangle of the Neck 250</i>	<b>243</b>
<b>25. FACE AND SCALP</b> <i>Face 251</i> <ul style="list-style-type: none"> <li>• <i>Incisions 251</i></li> <li>• <i>Sensory Nerves of the Face 252</i></li> <li>• <i>Facial Muscles (Superficial) 253</i></li> <li>• <i>Terminal Branches of Facial Nerve (Motor Nerve of Face) 253</i></li> <li>• <i>Blood Vessels of the Face 254</i></li> <li>• <i>Facial Muscles (Deep Layer) 254</i></li> </ul> <i>Scalp 255</i> <ul style="list-style-type: none"> <li>• <i>Nerves and Blood Vessels in the Anterior Half of Scalp 255</i></li> <li>• <i>Nerves and Blood Vessels in the Posterior Half of Scalp 256</i></li> <li>• <i>Muscles of Scalp 256</i></li> </ul> <b>Take Home Message 257</b> <b>Objectives for Face and Scalp 258</b>	<b>251</b>
<b>26. CRANIAL CAVITY</b> <ul style="list-style-type: none"> <li>• <i>Removal of Brain 259</i></li> <li>• <i>Procedure A 259</i></li> </ul>	<b>259</b>

• <i>Procedure B</i>	262	
• <i>Anterior Cranial Fossa</i>	262	
• <i>Middle Cranial Fossa</i>	263	
• <i>Posterior Cranial Fossa</i>	264	
<b>Take Home Message</b>	<b>266</b>	
<b>Objectives for Cranial Cavity</b>	<b>267</b>	
<b>27. ORBIT AND LACRIMAL APPARATUS</b>		<b>268</b>
<i>Orbit</i>	268	
• <i>Superficial Contents</i>	268	
• <i>Deep Structures</i>	269	
<i>Lacrimal Apparatus</i>	271	
<b>Take Home Message</b>	<b>272</b>	
<b>Objectives for Orbit and Lacrimal Apparatus</b>	<b>274</b>	
<b>28. PAROTID AND INFRATEMPORAL REGIONS</b>		<b>275</b>
• <i>Parotid Gland</i>	275	
• <i>Infratemporal Fossa (Superficial Dissection)</i>	276	
• <i>Temporomandibular Joint</i>	278	
• <i>Infratemporal Fossa (Deep Dissection)</i>	278	
<b>Take Home Message</b>	<b>280</b>	
<b>Objectives for Parotid and Infratemporal Regions</b>	<b>281</b>	
• <i>Parotid Gland</i>	281	
• <i>Infratemporal Region and Temporomandibular Joint</i>	281	
<b>29. SUBMANDIBULAR REGION AND DEEP DISSECTION OF THE NECK</b>		<b>282</b>
• <i>Submandibular Region</i>	282	
• <i>Deep Dissection at the Root of the Neck</i>	284	
• <i>Cervical Plexus</i>	285	
• <i>Styloid Apparatus</i>	285	
• <i>Deep Dissection at the Base of Skull</i>	286	
• <i>Prevertebral Muscles</i>	288	
<b>Take Home Message</b>	<b>289</b>	
<b>Objectives for Submandibular Region and Deep Structures of the Neck</b>	<b>291</b>	
<b>Submandibular Region</b>	<b>291</b>	
<b>Deep Structures of the Neck</b>	<b>291</b>	
<b>30. DEEP STRUCTURES OF THE BACK OF THE NECK AND THE TRUNK</b>		<b>292</b>
• <i>Dissection of the Suboccipital Triangle</i>	292	
• <i>Deep Dissection of the Back of Trunk</i>	294	
• <i>Removal of Spinal Cord</i>	295	
• <i>Joints of the Skull and Vertebral Column</i>	298	
<b>Take Home Message</b>	<b>300</b>	
<b>Objectives for Deep Structures of the Back of the Neck and the Trunk</b>	<b>301</b>	
• <i>Muscles of the Back</i>	301	
• <i>Spinal Cord and Coverings</i>	301	
• <i>Joints of the Skull, Vertebral Column and Sacroiliac Joint</i>	301	

**Additional Objectives for the Head and Neck 303**

- *Muscles and Fasciae of the Head and Neck* 303
- *Nerves of the Head and Neck* 303
- *Blood Vessels and Lymphatics of the Head and Neck* 303
- *Viscera of the Neck* 304
- *Skeleton of the Head and Neck* 304

**Section 7: Optional Dissection/Study on Prosected Specimens****31. NASAL CAVITY, ORAL CAVITY AND PHARYNX 307***Nasal Cavity* 307

- *Nasal Septum* 307
- *Lateral wall of Nasal Cavity* 308

*Oral Cavity* 310

- *Tongue* 311
- *Soft Palate* 311

*Pharynx* 313**32. LARYNX, EYE AND EAR 315***Larynx* 315*Eye* 320

- *Eyeball* 320

*Ear* 322

- *Parts of Ear* 322

**Review***Upper Limb* 327*Lower Limb* 329

- *Cutaneous Innervation and Nerve Supply of Muscles* 329

*Abdomen and Pelvis* 331*Thorax* 333*Head and Neck* 335*Index*

337