ACEM PRIMARY 2011/1 Anatomy VIVA Morning Session 1 ***Candidate Number……..*** **AGREED MARK……**

TOPIC	QUESTIONS	KNOWLEDGE **(essential in bold)**	NOTES
Q1. X-ray: Ankle	Please demonstrate the ligamentous attachments of the ankle joint What is the most common injury of the ankle joint?	**Three lateral ligaments**1.Anterior talofibular: Flat weak. 2. Posterior talofibular: strong band that runs medially. 3. Calcaneofibular: round cord that passes post/inf from the tip of fibula. Medial: **Deltoid ligament**: attaches to Medial Malleolus and fans out to talus (ant + post), calcaneus and navicular **Sprain**, **lateral ligament** (anterior talofibular)	Name or describe 3/4
Q2. Model: Elbow joint/forearm	Demonstrate and describe on the model the movements of supination and pronation Prompt: What structures are involved? What muscles are involved in supination and pronation? What nerves are involved in supination and pronation?	**Rotation of the head of radius in annular ligament** **Radius rotates laterally around its axis** Distal radio-ulnar joint is the pivot for the rotatory movement **Both movements and name annular ligament** **Supination: Supinator, Biceps,** plus EPL and ECRL **Pronation: Pronator teres, Pronator quadratus** **Supination: Radial, Musculocutaneous,** (deep branch of radial to Sup) **Pronation: Median,** (ant interosseous br to PQ)	Bold to Pass
Q3. Bone: Lumbar Vertebra	Identify this bone, and demonstrate its bony features. What movements occur in the lumbar spine?	**Body** **Pedicle** **Transverse processes** **Superior and inferior articular facets** **Spinous process** **Lamina** **Vertebral foramen** **Intervertebral foramina** **Flexion + extension** Lateral flexion Very limited rotation	7/9 to pass

	What structures are traversed when you perform a lumbar puncture?	Skin Fat Thoracolumbar fascia Supraspinous ligament Interspinous ligament **Ligamentum flavum ["pop"]** Extra/Epidural space w fat + venous plexus **Dura mater** Arachnoid mater Into CSF in subarachnoid space	5/10 including lig flavum and dura
Q4. Photo: Thoracic Inlet	Identify the veins involved in drainage of the head and upper limb on the **Left** side of this specimen The Right IJV has been removed (demonstrate this) – identify the structures that lie adjacent to the Right IJV.	**L IJV** **L subclavian** **L brachiocephalic** Inf thyroid v **SVC** **R common carotid** **R subclavian** and its branches **(identify at least one of:** Thyro cx trunk, suprascap a, sup cx a, asc cx a, inf thyroid a, int tx a) **Identify at least one of:** Phrenic n, Recurrent laryngeal n, Vagus n,Upper trunk of brachial plexus	Prompt to orientate L/R Bold to Pass Prompt that clavicle, sternomastoid m and RIJV have been removed.
Q5. Hand muscles	Describe the muscles of the thenar eminence and their function What is their innovation	APB (abduction and opposition) opponens policis (opposes thumb, draws thumb metacarpal medially to centre of palm and rotates it medially) FPB (flexion) **Median (recurrent branch)** Deep branch of ulnar	2/3

ACEM PRIMARY 2011/1 Anatomy VIVA Afternoon Session 1 ***Candidate Number……..*** **AGREED MARK……**

TOPIC	QUESTIONS	KNOWLEDGE **(essential in bold)**	NOTES
Q1. Xray hand/ wrist	Identify the bones of the *carpus* on this Xray (prompt "carpus" if start with other bones) Identify the bones of the carpus on the lateral view	**Scaphoid/lunate/triquetrum/ pisiform/ hamate/ capitate/ trapezoid/trapezium** **Lunate, Capitate** and one other	All 8 to pass
Q2. Knee – Model Movements and locking	(a) Identify the ligaments of the knee joint and their attachments that you can see in this model.	1. **Patellar ligament** – apex of patella to tibial tuberosity 2. **Fibular collateral ligament** (FCL or LCL) – lateral epicondyle of femur to lateral surface of fibular head 3. **Tibial collateral ligament** (TCL or MCL) – medial epicondyle of femur to medial condyle and superior aspect of medial surface of tibia 4. **Anterior cruciate ligament** (ACL) – anterior intercondylar area of tibia to posterior part of medial side of lateral condyle of femur 5. **Posterior cruciate ligament** (PCL) – posterior intercondylar area of the tibia to anterior aspect of lateral surface of medical condyle of femur 6. Posterior meniscofemoral ligament	Bold to pass
	(b) Describe the main movements of the knee joint and the muscles that are involved. Prompt: Are there rotational movements of the knee that you can describe?	1. **Extension – quadriceps femoris** (weakly: tensor of fascia lata) 2. **Flexion – semitendinosus, semimembranosus,** long and short heads of **biceps femoris** 3. Medial rotation – When flexed - semitendinosus, semimembranosus. When non-bearing knee extended - popliteus. 4. Lateral rotation – When flexed - biceps femoris	Bold to pass
	(c) Describe the locking and unlocking process that occurs with the weight- bearing knee as we extend and flex the joint whilst walking.	When **knee fully extended** and weight bearing – knee passively locks due to **medial rotation of femoral condyles on tibial plateau.** Knee **unlocks** through contraction of popliteus – **rotating femur laterally on tibial plateau** to allow flexion.	Bold to pass

Q3. Bone **Thoracic Vertebrae**	Identify this bone, and demonstrate its bony features. What movements are possible at thoracic vertebrae? Demonstrate the ligaments.	**Body, Pedicle, Transverse processes** **Articular facets** - Superior and inferior **Costal facets** - Superior/Inferior costal facets [head of rib]; Transverse costal facet [tubercle of rib] **Spinous process, Lamina** **Vertebral foramen** and space for intervertebral foramina **Rotation**, some lateral flexion, very limited flexion + extension **Ant longitudinal, Post longitudinal, Supraspinous, Ligamentum flavum**	8/11
Q4. Lateral neck (+/- face)	Identify the major regions or triangles of the neck Identify the carotid triangle and its boundaries Identify the structures within the carotid triangle	**Anterior triangle** (aka ant cx region) bounded by midline, ant bo scm, inf bo mandible **Posterior triangle** (aka lat cx region) bounded by post bo scm, ant bo trap, middle 1/3 clavicle **sup belly omohyoid, post belly digastric, ant border SCM** **CCA, ICA, ECA** Branches of ECA: sup thyroid, lingual, facial visible, Lymph nodes, Hypoglossal n.	Must correctly ID both triangles and name boundaries of at least one
Q5. Foot sensation	Describe the peripheral nerves which supply sensation to the foot? Describe the dermatomes of the dorsum of the foot. **Bonus**	Peripheral nerves - sole- **tibial nerve** (heel region by medial calcaneal branches, lateral sole by lateral plantar nerve and medial by medial plantar nerve) - dorsum of foot- lateral border by sural nerve, most of dorsum supplied by **superficial fibular (peroneal) nerve, 1st web space by deep fibular (peroneal) nerve**. - Saphenous n. Dorsum- **S1** lateral 2 toes and border of foot, **L5 from lateral leg to medial foot including other toes**, L4- medial border foot and heel Dermatomes - Sole – S1 and L5 form the bulk of the sole, S1 laterally and L5 medially. L4 and S2 may also contribute on medial border of sole.	Must have tibial nerve for sole and mainly fibular nerves (superficial and deep) for dorsum to pass L5 and S1 must be included with understanding of lateral border for S1 and medial dorsum for L5