VIVAs CNS

Question 5: Discussion	a. Draw or describe the circle of Willis	IC x 2 → MCAx2 and ACAx2 VA x2 → Basilar x1→PCAx2 ACA linked by ant communicating artery PCA each join IC by post comm. Art
	b. Which part of the brain is supplied by each of the major arteries?	ACA – medial/sup surface of cerebrum except occ MCA – lateral surface and temporal lobes PCA – occipital lobe, inferior cerebrum

5. Circle of Willis – branches and areas supplied	1. What is the blood supply of cerebral hemispheres?	1. Internal carotids and vertebral arteries 2 circle of Willis optic chiasma and infundibulum 3 posterior- vertebral aa – post cerebral aa 4 anastamosis post. communicating aa 5 internal carotid becomes MCA 6 divides to give anterior cerebral artery 7 anterior communicating artery
	2. What motor and sensory areas lie in distribution of middle cerebral artery	1 motor and sensory of opposite half of body except legs and perineum 2 auditory and speech areas

SECOND QUESTION (if needed)	**Demonstrate the areas supplied by the middle cerebral artery and describe the function of these areas?**	
POINTS REQUIRED	**1 Lateral surfaces of both cerebral hemispheres excluding anterior part of frontal lobe and occipital lobe, including basal ganglia but not thalamus**	**Pass if identify that occ. + most fr. lobes are not MCA**

QUESTION	ESSENTIAL KNOWLEDGE	NOTES
Identify the non – bony features on this CT scan.	Orbits Temporal lobes in middle cranial fossa Pons 4th ventricle Cerebellum and vermis	Need temporal lobe, pons and cerebellum
Which bony sinuses are shown?	Ethmoid, sphenoid, mastoid	2/3
What is the blood supply of the cerebellum?	Vertebral arteries – basilar artery – post cerebral Ant & post inferior cerebellar art Superior cerebellar art	Need posterior circulation

QUESTION	ESSENTIAL KNOWLEDGE	NOTES
Identify the anatomical features on this CT scan through base of the skull	I.D.: Bones: (occiput, temporal, sphenoid, nasal) Air spaces: (mastoid air cells, sphenoid sinus, ethmoid, nasal cavity) Intracranial: 4th ventricle, cerebellum, vermis, temp lobe, pons)	 2 of 4 to pass 2 of 4 to pass 3 of 5 to pass

TOPIC	QUESTION	ESSENTIAL KNOWLEDGE	NOTES
Question 1:	Name the intracranial structures that are visible on this non contrast CT Prompt 4th Ventricle	Cerebellum (right and left hemispheres united by central vermis). The pons. The 4th ventricle and pre-pontine cistern. The right & left temporal lobes in the middle cranial fossae. The mastoid, sphenoid and ethmoid sinuses.	Cerebellum, pons & 4th ventricle to pass.
Question 2:	Describe the posterior circulation of the brain *Prompt: What arteries contribute to the posterior circulation of the brain*	The vertebral As (originating from the subclavian As) give off the post and ant inf cerebellar As then unite (at the caudal border of the pons) to form the basilar A. The basilar A ascends to the superior border of the pons giving off the sup cerebellar A. It terminates by dividing into the 2 post cerebral As. The post communicating As join the post cerebral As to the middle cerebral A (& hence to the ant circulation).	Vertebral, basilar, post cerebral **and** post communicating As to pass.
Question 3:	What areas of the brain do the main arteries of the posterior circulation supply	Vertebral As -> cranial meninges & cerebellum. Basilar A -> brainstem, cerebellum & cerebrum. Post cerebral As -> inf aspect of cerebral hemispheres & occipital lobe. Post communicating As -> optic tract, cerebral peduncle, int capsule & thalamus.	Must correctly identify that the vertebral **and** basilar As -> cerebellum **and** post cerebral As -> inf of the cerebral hemispheres to pass.

TOPIC: PICTURE: CT SCAN BRAIN_____ **NUMBER:** _1_____

OPENING QUESTION	Name the visible intracranial structures on this non contrast CT scan	**COMMENTS**
POINTS REQUIRED	1 Lobes (frontal,parietal/temporal,occipital)	6 structures from 1st 5
	2 lateral ventricles (anterior and posterior horns)	
	3.choroid plexus	
	4 pineal gland	
	5 thalamus	
	6 internal capsule, basal ganglia, caudate, globus pallidus, putamen, sylvian fissure or lateral sulcus	Plus 1 of these for pass
PROMPTS		
SECOND QUESTION (if needed)	What structures does CSF pass through to reach the base of the brain?	
POINTS REQUIRED	1 Lateral venticles →interventricular formen	3rd and 4th ventricles in sequence to pass
	→ 3rd ventricle	
	→ aqueduct	
	→ 4th ventricle (posterior to pons/medulla)	

OPENING QUESTION (if needed)	Describe the circulation of CSF	
POINTS REQUIRED	1 formed in choroidal epithelial cells (plexus) in lateral, 3rd and 4th ventricles	3 to pass
	2 lateral ventricles→3rd ventricle via intraventricular foramina	
	3 3rd ventricle→ 4th ventricle via aqueduct	
	4 some CSF passes into subarachnoid space via median and lateral aperatures.	
	5 most CSF passes into interpeduncular and quadrigeminal cisterns	
	6 CSF from the various subarachnoid cisterns flows superiorly through sulci and fissures on medial and superolateral surfaces of the cerebral hemispheres. 7 absorbed in arachnoid granulations esp those that protrude into superior sagittal sinus	
PROMPTS	How does CSF flow through the nervous system?	
SECOND QUESTION (if needed)	What are the functions of CSF	
POINTS REQUIRED	1 protects brain by providing cushion effect	1 to pass
	2 buoyancy effect to prevent compression of nerves and vessels	