

Course No: MGDC 2203  
Course Title: Neuroanatomy  
Date: 24/05/2014  
No. of Questions: 4  
Time: 2 hours

University of Palestine



Final Exam  
Second Semester 2014  
Total Grade: 60

Instructor Name: Dr Eyad Hussein  
Student No.: \_\_\_\_\_  
Student Name: \_\_\_\_\_  
College Name: \_\_\_\_\_

• Answer all Questions:

**Q1: Fill the answer in the space for the following statements: (10/5)**

1. Branches of the carotid, vertebral and basilar arteries:

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2. Site, origin, parts and communication of the lateral ventricles:

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3. Which ocular muscles are supplied by the oculomotor, trochlear, abducent and sympathetic nerves?

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4. Course and branches of the mandibular nerve:

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5. Nuclei, functions and branches of the vagus nerve:

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**Q2: Write between the brackets in the column A the number of the suitable word in the column B: (5/10)**

A	B
1. ( ) Myelohyoid m.	a. Temporal nerve of VII.
2. ( ) Stylopharyngeus m.	b. Vagus nerve.
3. ( ) Styloglossus m.	c. Posterior division of V <sub>5</sub> nerve.
4. ( ) Geniohyoid m.	d. Marginal mandibular nerve of VII.
5. ( ) Stylohyoid m.	e. Buccal nerve of VII.
6. ( ) Anterior auricular m.	f. Ansa cervicalis.
7. ( ) Sternothyroid m.	g. Glossopharyngeal nerve.
8. ( ) Orbicularis oris m.	h. Zygomatic nerve of VII.
9. ( ) Depressor angular oris m.	i. C <sub>1</sub> joining hypoglossal nerve.
10. ( ) Lateral pterygoid m.	j. Anterior division of V <sub>5</sub> nerve.
	k. Hypoglossal nerve itself.
	l. Posterior auricular nerve of VII.
	m. None of the above.

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**Q3: Put true (T) or false (F) between brackets: \_\_\_\_\_ (15/5)**

**1. The meninges:**

- A. ( ) The maxillary nerve supplies the dura matter of middle cranial fossa.
- B. ( ) The diaphragm cella (septa of dura matter) separates pituitary gland (above) from optic chiasma (below).
- C. ( ) Arachnoid mater is a thin membrane which sends sheaths around the cranial nerves till their points of exit from the skull.
- D. ( ) Together the dura and arachnoid matter are often called leptomeninges.
- E. ( ) The inner and outer layers of dura matter are adherent except in certain places where they separate to form intracranial cisterns.
- F. ( ) Subdural space a potential space between the dura and arachnoid maters, which contains a small amount of serous fluid and fat.

**2. About the spinal cord (SC):**

- A. ( ) The L5 SC segment lies opposite the T12 vertebra.
- B. ( ) The T6 SC segment lies opposite the T4 vertebra.
- C. ( ) The C7 SC segment lies opposite the C5 vertebra.
- D. ( ) The T9 vertebra lies opposite the T11 SC segment.
- E. ( ) The spinal nerve T3 emerges exit through the intervertebral foramen between T3 and T4 vertebrae.
- F. ( ) The epiconus is the L3, 4, 5 and S1, 2 segments of the SC.

**3. The recurrent laryngeal nerve:**

- A. ( ) It is a branch of the inferior ganglion of vagus nerve.
- B. ( ) It supplies the mucous membrane of larynx below the vocal cord.
- C. ( ) Closely related to lateral surface of the thyroid gland.
- D. ( ) Right recurrent laryngeal nerve arises from the vagus nerve in front the first part of subclavian artery.
- E. ( ) It supplies the cricoarytenoid muscle.

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**4. The chorda tympani nerve:**

- A. ( ) It arises from the superior salivary nucleus only.
- B. ( ) It carries taste and general sensation from the anterior 2/3 of the tongue.
- C. ( ) It carries preganglionic parasympathetic fibers to the submandibular ganglion.
- D. ( ) It joins the lingual nerve of the anterior division of mandibular n.
- E. ( ) It leaves the facial canal through a tunnel in the posterior wall of the middle ear.
- F. ( ) It runs to the medial side of sphenoid and joins the lingual nerve in the pterygopalatine fossa.

**5. The Cerebellum:**

- A. ( ) Flocculonodular part has maintain equilibrium of the trunk.
- B. ( ) Fastigial nucleus has muscle tone regulation.
- C. ( ) Muscle paralysis is sign of the cerebellum lesion.
- D. ( ) Globose nucleus has muscle tone regulation.
- E. ( ) Posteriolateral fissure lies between flocculonodular and posterior lobes.
- F. ( ) It is the part of the brain, located dorsal to the pons and the medulla occupies most of posterior cranial fossa.

**Q4: Choose the correct (ONE) answer for each of the following: (30/30)**

**1. The cells that support, protect, and nourish the neurons are:**

- A. Multipolar neuron.
- B. Neuroglia.
- C. Ganglion.
- D. Unipolar neuron.
- E. Bipolar neuron.

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**2. The collections of posterior and anterior roots that occupy the lumbar cistern are collectively known as which of the following?**

- A. Cauda equina.
- B. Conus medullaris.
- C. Sacral plexus.
- D. Epiconus.
- E. None of the above.

**3. Regarding the spinal cord, all are correct Except:**

- A. The spinal cord is the continuation of the medulla oblongata.
- B. The spinal cord ends at the level of L3 in the adult.
- C. In the adult, the dura mater ends at the level of S2 vertebra.
- D. The ventral 2/3 are supplied by the anterior spinal artery.
- E. The conus medullaris is fixed to the coccyx by the filum terminale.

**4. All of the following statements are correct Except:**

- A. The pontine arteries are branches of the basilar artery.
- B. The posterior communicating artery is branch of the internal carotid artery.
- C. The ophthalmic artery is branch of the internal carotid artery.
- D. The posterior spinal artery arises from the vertebral artery.
- E. The internal auditory artery is branch of the vertebral artery.

**5. Pons is supplied by the:**

- A. Posterior cerebral artery.
- B. Anterior spinal artery.
- C. Anterior choroidal artery.
- D. Anterior inferior cerebellar artery.
- E. Middle cerebral artery.

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**6. One of the following arteries is not part of the Wills formation:**

- A. Anterior cerebral artery.
- B. Middle cerebral artery.
- C. Posterior cerebral artery.
- D. Anterior communicating artery.
- E. Posterior communicating artery.

**7. All of the following venous sinuses are paired Except:**

- A. Transverse sinus.
- B. Superior petrosal sinus.
- C. Sigmoid sinus.
- D. Straight sinus.
- E. Sphenoparietal sinus.

**8. The CSF sample obtained during the lumbar tap would be considered pathological if:**

- A. The CSF was clear and colorless.
- B. The CSF total protein =150 mg/dl.
- C. The CSF sugar = 60 mg/dl (70% of serum glucose).
- D. The CSF has lymphocytes is approximately 5/mm<sup>3</sup>.
- E. The CSF amount is 100-150cc.

**9. The fourth ventricle is a cavity of:**

- A. Prosencephalon.
- B. Mesencephalon.
- C. Rhombencephalon.
- D. Telencephalon.
- E. Myelencephalon.

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**10. The following statements concerning the ventricular system are correct**

**Except:**

- A. The aqueduct of Sylvius connects the third ventricle with the fourth ventricle.
- B. The two lateral ventricles communicate directly with one another through the interventricular foramen.
- C. The ventricles are developed from the neural tube in the embryo.
- D. The lateral ventricle communicates with the 3rd ventricle through the foramen Monro.
- E. The choroid plexuses are found in the lateral, third and fourth ventricles.

**11. All of the following are structures of the cerebellum Except:**

- A. Fastigial nucleus.
- B. The dentate nucleus.
- C. The emboliform nucleus.
- D. The red nucleus.
- E. The globose nucleus.

**12. All of the following are functions of the cerebellum Except:**

- A. Muscle tone regulation.
- B. Maintain equilibrium of the trunk.
- C. Learning of the motor skills.
- D. Coordination of fine voluntary motor activity.
- E. Regulation of fine voluntary motor activity.

**13. Which of the following cranial nerves is/are not related to the cavernous sinus?**

- A. Oculomotor nerve.
- B. Trochlear nerve.
- C. Abducent nerve.
- D. Ophthalmic and maxillary divisions of the trigeminal nerve.
- E. Maxillary and mandibular divisions of the trigeminal nerve.



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**14. The inferior oblique muscle of the eye is innervated by the**

- A. Ophthalmic nerve.
- B. Trochlear nerve.
- C. Abducent nerve.
- D. Oculomotor nerve.
- E. None of the above.

**15. The corneal reflex is a test for the integrity of:**

- A. Ophthalmic nerve.
- B. Maxillary nerve.
- C. Facial nerve.
- D. Both A & B.
- E. Both A & C.

**16. Which of the following is not a function of the facial nerve?**

- A. Parasympathetic innervations of lacrimal glands.
- B. Motor impulses to muscles of facial expression.
- C. Taste and general sensation of the anterior 2/3 of the tongue.
- D. Parasympathetic innervations of submandibular glands.
- E. Parasympathetic innervations of sublingual glands.

**17. The cranial division of the accessory nerve:**

- A. Joins the glossopharyngeal nerve and distributed through it.
- B. Joins the inferior ganglion of vagus nerve and distributed through it.
- C. Joins the superior ganglion of vagus nerve and distributed through it.
- D. Is found in the roof of the posterior triangle.
- E. Supplies the sternocleidomastoid and trapezius muscles.

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**18. A patient presents with an inability to shrug her shoulders. This is due to a paralysis of the \_\_\_\_\_ muscle, which is innervated by \_\_\_\_.**

- A. Trapezius, cranial division of XI nerve.
- B. Trapezius muscle, spinal division of XI nerve.
- C. Deltoid muscle, cranial division of XI nerve.
- D. Deltoid muscle, spinal division of XI nerve.
- E. None of the above.

**19. The main parasympathetic nucleus in the brain stem is:**

- A. Main sensory nucleus.
- B. Solitary nucleus.
- C. Dorsal motor nucleus of vagus nucleus.
- D. Inferior salivary nucleus.
- E. None of the above.

**20. If a recurrent laryngeal nerve is cut during surgical procedures in the neck, which intrinsic muscle of the larynx will be spared on the same side as the cut?**

- A. Lateral cricoarytenoid muscle.
- B. Posterior arytenoid muscle.
- C. Oblique arytenoid muscle.
- D. All of the above.
- E. None of the above.

**21. Damage to the facial nerve at the intrafallopian canal above the geniculate ganglion would affect:**

- A. Ipsilateral facial expression.
- B. Taste from the anterior two-thirds of the tongue (ipsilateral).
- C. Lacrimation.
- D. A & B only.
- E. A, B, & C.

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**22. The posterior auricular nerve is a branch of what nerve?**

- A. Facial nerve immediately after exit from stylomastoid foramen.
- B. Facial nerve at the fallopian (facial) canal.
- C. Cervicofacial root of facial nerve.
- D. Temporofacial root of facial nerve.
- E. None of the above.

**23. The infratrochlear nerve is a terminal branch of what nerve?**

- A. Frontal nerve.
- B. Nasociliary nerve.
- C. Lacrimal nerve.
- D. Maxillary nerve.
- E. None of the above.

**24. Sensory innervations to the upper two premolar teeth and gum is supplied by the:**

- A. Anterior superior alveolar nerve.
- B. Middle superior alveolar nerve.
- C. Posterior superior alveolar nerve.
- D. Both A & B.
- E. All of the above.

**25. Inability to shift the mandible to the right would indicate paralysis of the:**

- A. Right lateral pterygoid muscle.
- B. Left medial pterygoid muscle.
- C. Left lateral pterygoid muscle.
- D. Right medial pterygoid muscle.
- E. None of the above.

**26. The ophthalmic division of trigeminal nerve:**

- A. Gives rise to branches which supply the cornea.
- B. Innervates the muscles of eyes.
- C. Is necessary for the motor response of the corneal reflex.
- D. dura matter in the middle cranial fossa.
- E. Provides sensory innervation to the skin of the cheek.

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**27. Which of the following is NOT supplied by branches of the mandibular:**

- A. Gums and teeth of the lower jaw.
- B. Anterior two-thirds of the tongue.
- C. Muscles of mastication.
- D. Skin over the angle of the mandible.
- E. Dura matter in the middle cranial fossa.

**28. The mandibular nerve:**

- A. Passes through the foramen spinosum.
- B. Is a purely sensory nerve, with no motor components.
- C. Provides general and taste sensations to the anterior two third of the tongue.
- D. Passes through the pterygopalatine fossa.
- E. Its lingual branch carries the chorda tympani branch of facial nerve.

**29. Select the statement concerning the trigeminal nuclei that is correct:**

- A. The main sensory nucleus lies within the medulla oblongata.
- B. The spinal nucleus extends inferiorly as far as the sixth cervical segment.
- C. The main sensory nucleus lies within the pons.
- D. The mesencephalon nucleus lies in the pons.
- E. Both C & D.

**30. The trigeminal ganglion:**

- A. Contains the cell bodies of the sensory fibres of the fifth cranial nerve.
- B. Contains parasympathetic synapses.
- C. Lies entirely in the epidural space.
- D. Lies in a depression on the petrous temporal bone.
- E. Both A & D.

***End of Questions***  
***GOOD LUCK***