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**INSTITUTE OF INDIGENOUS MEDICINE, UNIVERSITY OF COLOMBO, RAJAGIRIYA**  
**BUMS LEVEL II – FIRST SEMESTER EXAMINATION – JULY 2016**  
**PHYSIOLOGY III**  
**COURSE CODE – AS 2102**

Date - 23.08.2016

Time: 2 1/2 hours

9.45. a.m. – 12.15 p.m.

Index no

Answer all questions.

**Part I - Structured Questions**

1.1 What is pupillary light reflex?

(01 marks)

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1.2 How it regulates the intensity of the light?

(01marks)

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1.3 What nerve is afferent limb of this reflex?

(0.5 marks)

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1.4 What nerve is efferent limb of this reflex?

(0.5 marks)

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1.5 What is Edinger- Westphal Nucleus?

(1.5 marks)

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II. What is consensual responds of eye? (1.2 marks)

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D. Fill in the blank with the word "Lost" or "Intact"

a. In **optic nerve damage** on one side

I. The ipsilateral direct reflex is \_\_\_\_\_

II. The ipsilateral consensual reflex is \_\_\_\_\_

III. The contralateral direct reflex is \_\_\_\_\_

IV. The contralateral consensual reflex is \_\_\_\_\_

b. In **Oculomotor nerve damage** on one side

I. The ipsilateral direct reflex is \_\_\_\_\_

II. The ipsilateral consensual reflex is \_\_\_\_\_

III. The contralateral direct reflex is \_\_\_\_\_

IV. The contralateral consensual reflex is \_\_\_\_\_

02.

A. How somatic nervous system differ from autonomic nervous system in the followings

I. Effectors:

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II. Efferent pathways:

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III. Neuro transmitter effects:

(1.5 marks)

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IV. What is visceral reflex? Explain with a diagram

(02 marks)

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V.1 What is nicotinic effect of acetylcholine?

(1.5 marks)

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V.2 What is muscarinic effects of acetyl choline?

(1.5 marks)

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VI. What happens to the acetyl choline in myasthenia gravis?

(01 marks)

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## Part II - Essay Questions

01. A. Explain briefly about the functional areas of the cerebral hemispheres. (10 marks)
- B. List the functional differences between the Right and Left cerebral hemispheres. (10 marks)
- C. A 44 years old farmer presented to the GP clinic with the history of weakness in his left side of the body last 2 days, and unable to hold the tea cup with his left hand due to tremor, but he has no tremor at rest. Also he felt in difficulties in wearing his slippers on the left foot.
- I. What could be the neurological problem? (10 marks)
- II. What are other symptoms and signs which you may expect in this patient? (10 marks)
02. A. Differentiate the clinical features in patient with the upper motor neuron lesion and lower motor neuron lesion. (10 marks)
- B. A 71 years old chronic smoker was presented to the neurology clinic with the history of left sided ear ache, difficulty in swallowing liquids, hoarseness of voice and vertigo. On examination his left eye is not closing properly and also his mouth was deviating to the right side while talking.
- I. What are the four cranial nerves involved in this patient? (10 marks)
- II. Which part of the brain could be affected in this patient? (10 marks)
- C. Describe the functions of the vagus nerve in the body. (10 marks)
03. A. List the functions of the spinal cord (10 marks)
- B. I. What is **brown sequard syndrome**? (10 marks)
- II. Describe the clinical features of the above condition? (10 marks)
- C. A 50 years old female presented to the OPD with the history of difficulty in walking in the dark, typically when closing her eyes in the shower and removing cloths over the head. She was in UK for 10 years in the past.
- I. What could be the neurological condition? (10 marks)
- II. What is the name for the above sign? (10 marks)
- III. What are the other clinical features which may be seen in this patient? (10 marks)
- IV. How this patient walk differ from the patient with cerebellar lesion? (10 marks)

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