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DMI-ST. EUGENE UNIVERSITY

ZAMBIA

DEGREE EXAMINATION – DECEMBER 2023

Semester: IV

357BO44 HUMAN PHYSIOLOGY II

Time: 3:00 Hours

Max. Marks: 100

Answer any FIVE Questions (5 x 20 = 100 Marks)

1. You are working at Chipata Level 1 hospital as a Nutritionist. The nurse on duty brings you a consultation from the Doctor concerning the nutrition aspect of treating a 55 years old patient on the male medical ward. You are told that he has been drinking since he was 18 years old and has now come to the hospital with paralysis and diarrhea. He has been forgetful of late and has a rash that is prominent in the skin exposed areas and appears like a necklace around the neck.

 - a) What be nutritional disorder could this patient be suffering? Recommend foods that can help with this condition. **(4 Marks)**
 - b) Briefly discuss the various divisions of the nervous system. **(5 Marks)**
 - c) Name the various types of neurons and state their functions. **(6 Marks)**
 - d) Discuss the various segments of the spinal cord and their respective number of spinal nerves. **(5 Marks)**
2. You are walking through Garden Compound when you see a 7 year old boy with cotton wool in his ear. You are told the boy has an ear condition locally known as 'imfuko'.

 - a) What is the medical term for the condition? What are the common causes?(**4 Marks**)
 - b) State the different segments of the ear and state which of them is affected in the case scenario above. **(4 Marks)**
 - c) Mention any two structure found in each of the segments of the ear you have mentioned in (b) above. **(6 Marks)**
 - d) State classification of deafness and list one cause under each class. **(6 Marks)**

3. A woman fell and died suddenly after complaining of headache for three days. On postmortem, it was found that she had a pituitary adenoma (a tumor of the pituitary gland)
- a) List six (6) hormones secreted by the pituitary gland. State the functions of each. **(6 Marks)**
- b) The pituitary gland receives signals through hormones secreted by the hypothalamus. Mention 6 hormones and explain their functions. **(6 Marks)**
- c) Write a detailed account on Bacterial Diseases. **(10 Marks)**
4. a) Explain the sources and functions of the following hormones: Follicle stimulating hormone (FSH), Luteinizing hormone (LH), progesterone, estrogen and testosterone. **(5 Marks)**
- b) Mention the two (2) phases of the menstrual cycle and state the duration of each. **(4 Marks)**
- c) Briefly explain the classification of abortion. **(5 Marks)**
- d) Define infertility and mention any four (4) causes of female infertility. **(6 Marks)**
5. A 13 year old girl has not been feeling well. She goes to the hospital and after several examinations and blood tests, she is told that she has tetany. Which two micronutrient deficiencies are associated with tetany and give any two foods you would recommend for someone with tetany.
- a) What is the cause of this condition and what are the signs and symptoms?**(6 Marks)**
- b) Briefly discuss the classification of bones, giving one example of each class.**(8 Marks)**
- c) Briefly describe the functional classification of joints, giving at least one example of each type of joint. **(6 Marks)**
6. You are working at Mwachisompola Rural Health Center as a Nutritionist. You are called to see to see a stroke patient in order for to advice the best feeding options. As you see the patient, you notice that his mouth is deviated to the left. When asked to protrude his tongue, it deviates towards the left too. He is also paralyzed on the right side of his body.
- a) Which cranial nerves are affected in this patient? Give a reason for your answer. **(4 Marks)**
- b) Briefly discuss the branches of the trigeminal nerve, stating the components and functions of each branch. **(6 Marks)**
- c) Briefly explain the different segments of spinal nerves. **(5 Marks)**
- d) Discuss any five differences between effects of the sympathetic nervous system. **(5 Marks)**

7. Your classmate has missing classes of late and has been complaining of constant headaches. She usually sits in the front row of the class because she's not able to see clearly when she sits at the back. She decided to go the hospital and she was told to start wearing glasses

a) Name the condition and use a diagram to explain what it is? State how it can be corrected? **(6 Marks)**

b) Briefly explain the process of accommodation in the eye. **(5 Marks)**

c) List any five (5) causes of blindness. **(5 Marks)**

d) Discuss how the eye controls the amount of light entering the eye. **(4 Marks)**