

PRELIM REVIEW 2013

09 OCTOBER 2013

Lesson Description

In this lesson we:

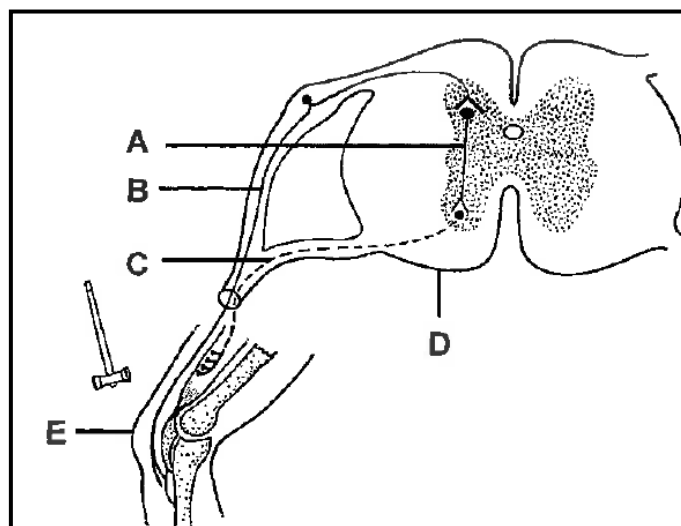
- Work through questions from Prelim 2013 Paper 2 examinations.

Questions

Question 1

(Adapted from GDE, Prelim 2013, Paper 2, Question 1.4)

The diagram below illustrates the pathway of a reflex action. Study the diagram below and answer the questions that follow.

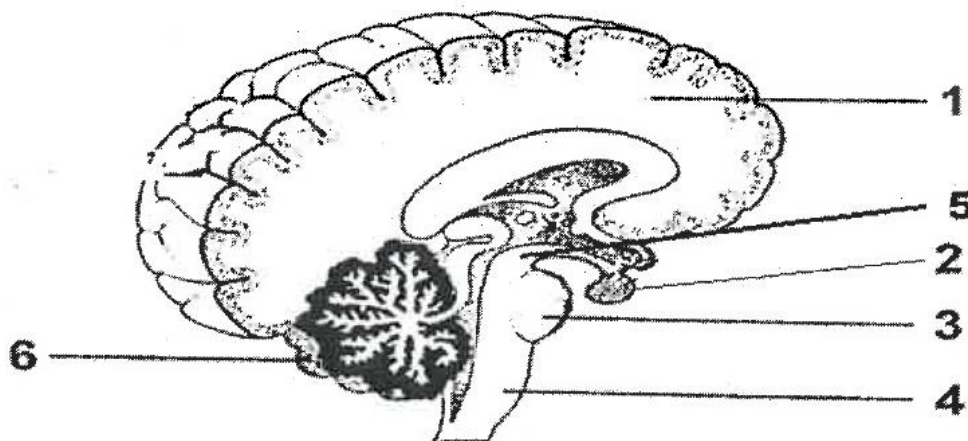


- a.) Give the LETTER of the part which:
- Receives the stimulus
 - Represents the central nervous system (CNS)
 - Transfers the nerve impulse to the effector.
 - Transfers the nerve impulse from the receptor to the central nervous system (CNS).
 - Transfers the nerve impulse from the sensory neuron to the motor neuron. (5)
- b.) Is the above regarded as a voluntary or an involuntary reflex action? (1)

Question 2

(Adapted from Mpumalanga, Prelim 2013, Paper 2, Question 2.3)

Study the diagram below and answer the questions that follow.

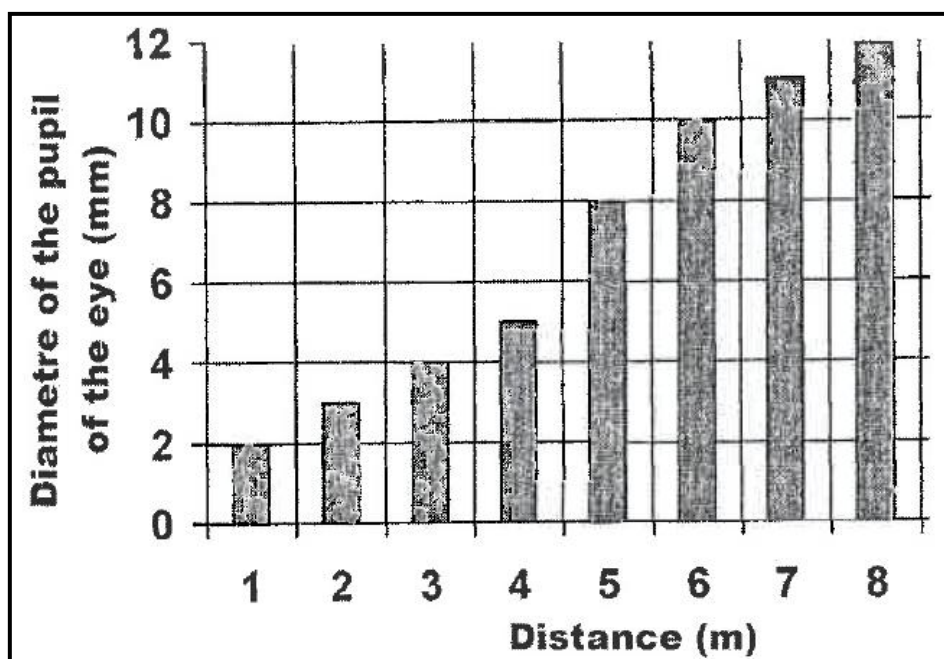


- a.) Label parts 1, 2, 3 and 6. (4)
- b.) State TWO functions, for each of parts 1, 4 and 5 respectively. (6)

Question 3

(Adapted from Mpumalanga, Prelim 2013, Paper 2, Question 1.4)

A person is seated in a dark room and is asked to cover one eye. A light source held at varying distances from the person is switched on and off at one-minute intervals, for a period of 10 seconds. During this period the diameter of the pupil of the eye is measured. The results are presented below.

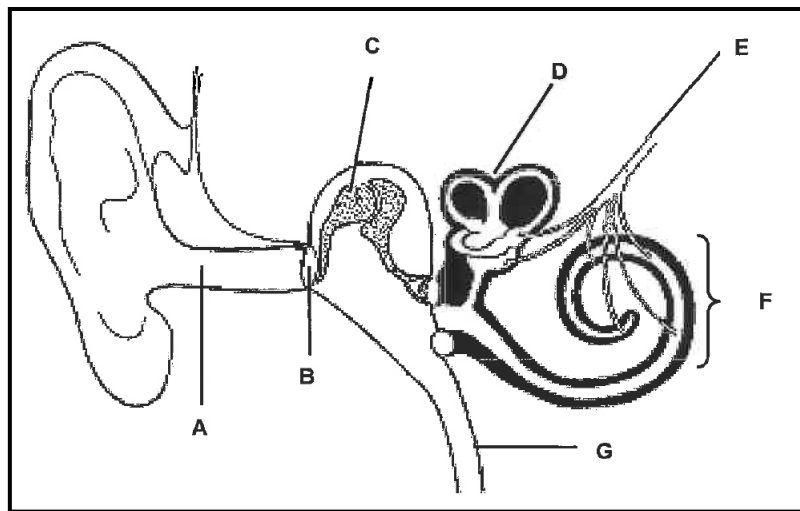


- Name the structure in the eye that regulates the diameter of the pupil. (1)
- What was the diameter of the pupil when the light source was the greatest distance away from the person? (2)
- Why was there a change in the diameter of the pupil when the light bulb was positioned at varying distances? (3)
- Explain the changes that occur in the pupil at the 2 metre and 6 metre distances. (4)

Question 4

(Adapted from GDE, Prelim 2013, Paper 2, Question 3.4)

Study the diagram below and answer the questions that follow.

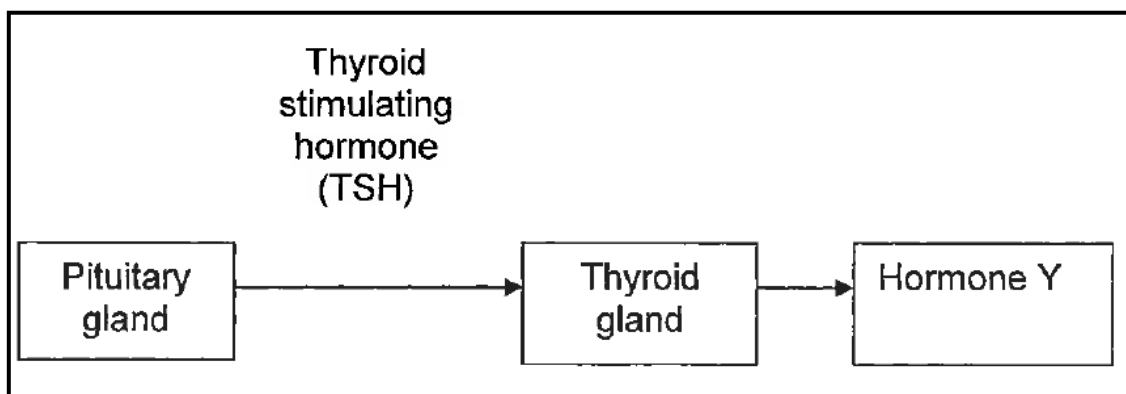


- Identify parts B, C and F. (3)
- Explain how the pinna of the ear is suited for its function. (2)
- Write the letter of the part which
 - Contains receptors for balance. (1)
 - Equalises the pressure on either side of part B. (1)
 - Conducts impulses to the brain. (1)

Question 5

(Adapted from GDE, Prelim 2013, Paper 2, Question 3.2)

The diagram shows the activity of the pituitary gland in the secretion of a hormone by the thyroid gland.

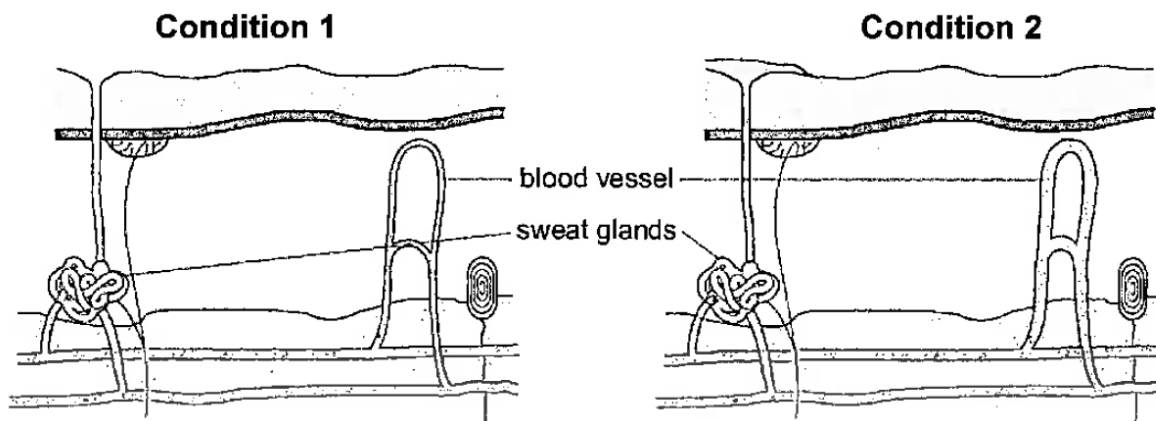


- Identify hormone Y. (1)
- Name the condition in children when under-secretion of hormone Y occurs. (1)
- Explain the homeostatic mechanism that exists when there is a shortage of hormone Y.

Question 6

(Adapted from GDE, Prelim 2013, Paper 2, Question 3.3)

The diagrams show structures within the human skin under two different external conditions.



- What external conditions prevail in condition 2? (1)
- Give TWO visible reasons for your answer in QUESTION a.) (2)
- In which layer of the skin are the sweat glands located? (1)
- Explain how the thyroid gland is functionally related to body temperature on a cold day. (3)



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