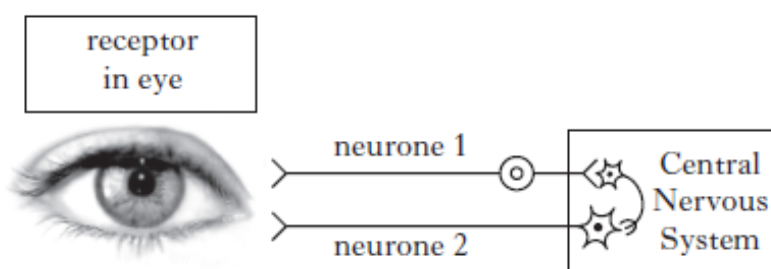


## Neurobiology Homework PART 2

21.   a) What type of neuron carries electrical impulses from the motor strip in the brain to an effector? (1)  
       b) Give an example of an effector in the body. (1)
22.   Name division of the autonomic system that increases sweat production.
23.   What is meant by "memory span"? (1)
24.   a)     Name the process which describes the transfer information from our long term memory to our short term memory. (1)  
       b)     Give **two** ways that information can be lost from our short term memory. (1)
25.   State the function of the corpus callosum. (1)
26.   What type of neural pathway involves nerve impulses being sent back through a circuit of neurons? (1)
27.   Explain what the term *summation* means. (2)
28.   a)     Name the part of a neuron through which a nerve impulse leaves. (1)  
       b)     Many mitochondria are present in this area of a neuron. Explain why. (2)
29.   a)     Other than rehearsal, name **two** methods that she used to transfer the information from our short term memory into our long-term memory. (1)  
       b)     Any information which is not transferred into long-term memory is displaced. Explain why displacement occurs. (2)
30.   Students store facts as they learn information. State the part of the brain in which such memories are stored. (1)
31.   a)     Name the gap between two neurons in a pathway. (1)  
       b)     Name the chemicals that are released into this gap. (1)  
       c)     Name the two processes involved in the removal of these chemicals from this gap. (1)
32.   a)     Name the type of neural pathway where a nerve impulse is transmitted from one neuron to many. (1)  
       b)     What is the importance of this type of neural pathway? (1)
33.   a)     Name the type of drug that mimics a neurotransmitter. (1)

- b) Name the chemicals that act as the body's natural pain killers. (1)
- c) Cocaine is a recreational drug that has an effect at this synapse. Cocaine binds to the dopamine re-uptake proteins. As a result, the reward pathway is stimulated for longer. Suggest how cocaine produces this effect. (2)
34. Name the type of neuron found within the CNS. (1)
35. The diagram below shows neurones connecting the eye with the central nervous system.

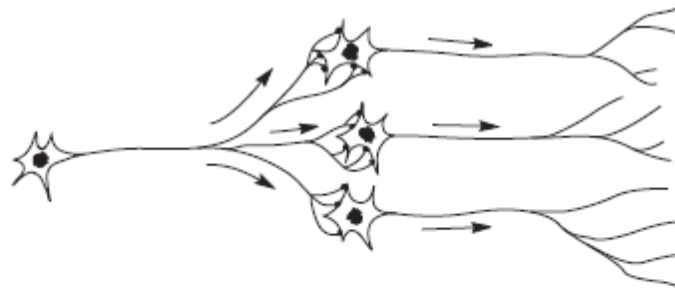


Which line in the table below identifies correctly the types of neurones and the direction of impulses which travel along them?

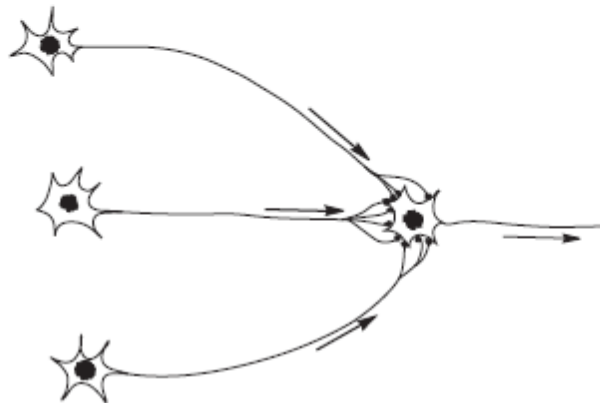
	<i>Neurone 1</i>	<i>Neurone 2</i>
A	Motor →	Sensory ←
B	Sensory →	Motor ←
C	Motor ←	Sensory ←
D	Sensory ←	Motor →

- (1)
36. A student had to learn her SQA candidate number which contained 9 digits. She was advised to use chunking to help her memorise it. Explain why the process of chunking would help her memorise the number. (2)
37. The diagram below shows two different neural pathways. Nerve impulses are travelling from left to right in both pathways.

**Pathway A**



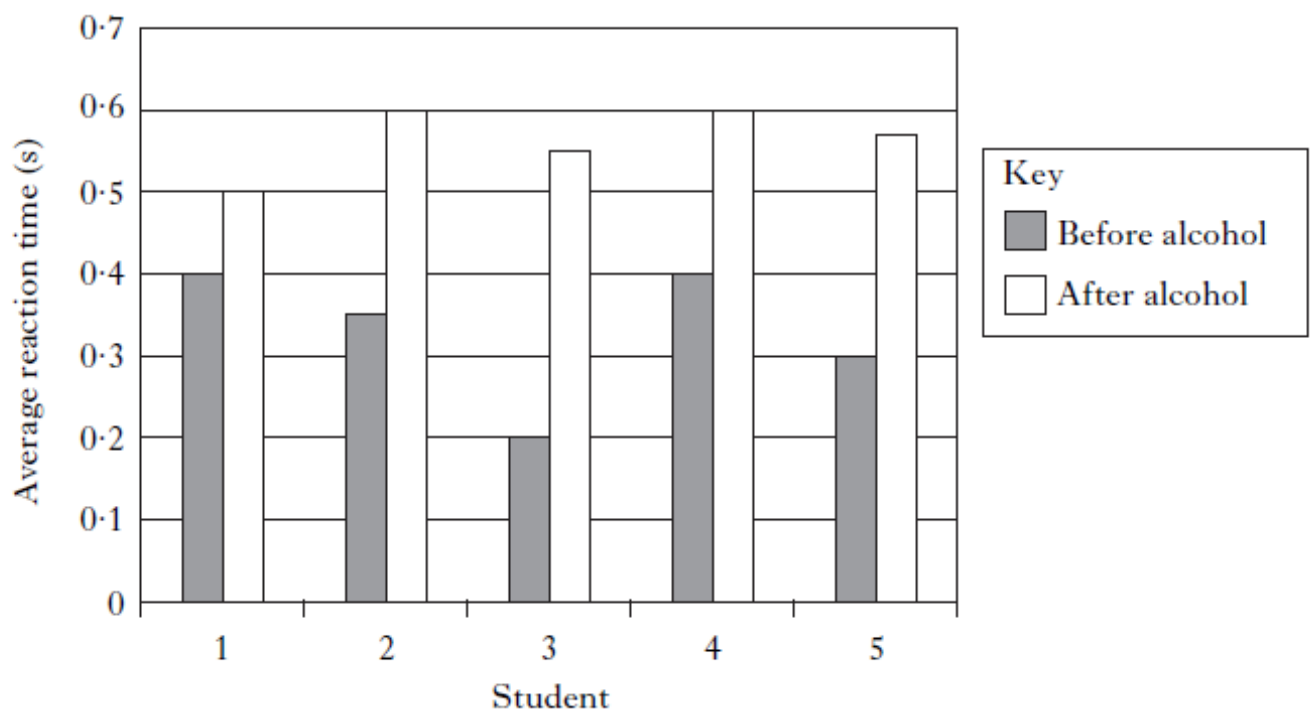
**Pathway B**



- Name the types of pathway represented by **A** and **B**. (1)
- Pathway **A** helps the hand to function. Explain how it does this. (2)

**39.** A scientist measured the reaction times of five students before and after drinking alcohol.

Average reaction times were calculated for each student.



The graph shows their average reaction times before and after drinking alcohol.

- a) What conclusions can be drawn from the results? (1)
- b) Why did the scientist calculate **average** reaction times? (1)
- c) What is the percentage increase in average reaction time for student 4 after drinking alcohol? (1)