## CHAPTER 1

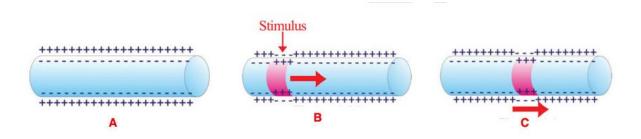
## SENSATION AND RESPONSES

## FIRST BEL 2.0-CLASS-5-WORKSHEET

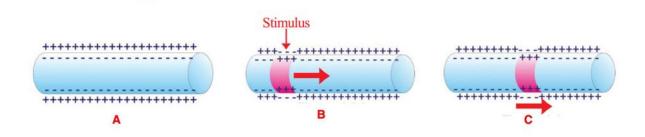
1. Observe the figure that shows the distribution of charge on either side of the plasma membrane of axon.



- a) What is the reason for the formation of different charges on either side of the plasma membrane?
- b) What change does the stimuli bring in the charge on either side of the plasma membrane? How does this change get transmitted as impulses through the axon?
- 2. Analyse the illustration of impulse transmission through axon and answer the following questions.

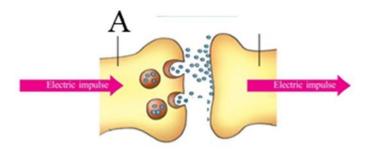


- a) What is the change on either side of the plasma membrane in the resting state?
- b) How the distribution of ions changes on either side of the plasma membrane when it gets stimulated? Explain
- 3. Analyse the illustration of impulse transmission through axon and answer the following questions.



- a) What are the changes that take place in illustration B when compared to A? Give reason for this change.
- b) Explain how this change brings about the transmission of impulses through axon.

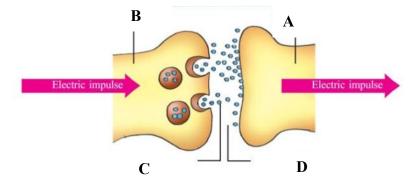
4. The illustration given below indicates the transmission of impulses from one neuron to another. Observe the illustration and answer the following question.



- a) Identify the part in the illustration.
- b) Identify the chemical substance which is secreted from A? Give one example for this chemical substance?
- 5. In a synapse the ends of neurons are not in close contact. Then how impulses are transmitted through a synapse.
- 6. Correct the mistakes, if any, in the flowchart and redraw.

Stimulus  $\rightarrow$  Dendrite  $\rightarrow$  Cyton  $\rightarrow$  Axon  $\rightarrow$  Synapse  $\rightarrow$  Axonite  $\rightarrow$  Adjacent Neuron  $\rightarrow$  Dendron

- 7. A synapse is only the junction between two neurons. Do you agree with this statement? Why?
- 8. The neurons at a synapse do not come into contact with each other. Even then, impulses cross over the synapse. How does this happen?
  - 9. Examine the picture and answer the questions

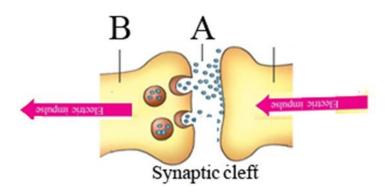


- a) Choose the correctly marked part from the following
  - i) A. Dendrite
- B. Synaptic Knob
- C. Synaptic cleft
- D. Neurotransmitter

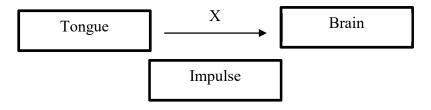
- ii) A. Synaptic Knob
- B. Dendrite
- C. Neurotransmitter
  - D. Synaptic cleft

- iii) A. Dendrite
- B. Synaptic Knob
- C. Neurotransmitter
- D. Synaptic cleft

- b) Name the chemical formed in between A and B. How do it help for a impulse transmitter?
- 10. Where are synapse formed? What are the functions of a synapse? What is the relationship between neuro transmitters and synapse? Write one example?
- 11. The gap between two adjacent nerve cells is called synapse. Do you completely agree with the statement? Why?
- 12. Observe the illustration and answer the questions



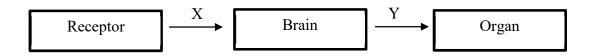
- a) What do A and B indicate?
- b) Write the function of B
- c) Write two examples of A.
- d) Reconstruct the illustration if there is any error in/it.
- e) What is the role of A in the transmission of impulses?
- 13. Analyse the illustration and identify the type of nerve denoted by the letter 'X'.



14. The illustration of a nerve based on its function as given below.

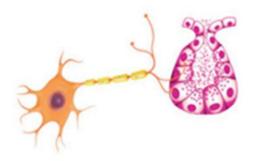
- a) Identify the nerve depicted in the illustration.
- b) Identify the nerve that carries impulse to from A and B?

15. Observe the illustration on impulse transmission through nerves and answer the questions:



- i) What kind of nerves do 'X' and 'Y' indicate?
- ii) What is the significance of synapse in impulse transmission?

## 16. Identify the image given below



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