STUDENT NAME:_____ **STUDENT NUMBER:**_____

Lab-RSD Task

Microstructure of Nervous Tissue

This Lab-RSD Task is based on Activities 10.1and 10.2 from Laboratory Session 10. Please complete the task independently. You are permitted to consult your lecture notes, textbooks and all of the resources (e.g. slides, computer micrographs, display models, images and diagrams) available in the laboratory session. You will have approximately 30 minutes to complete the task. Please submit it before leaving today's laboratory session.

Q1 Figure 1 shows a transverse section of the spinal cord stained with H&E. A colour version of this image is available on the monitors. Figure 2 is a diagrammatic representation of a segment of the spinal cord.

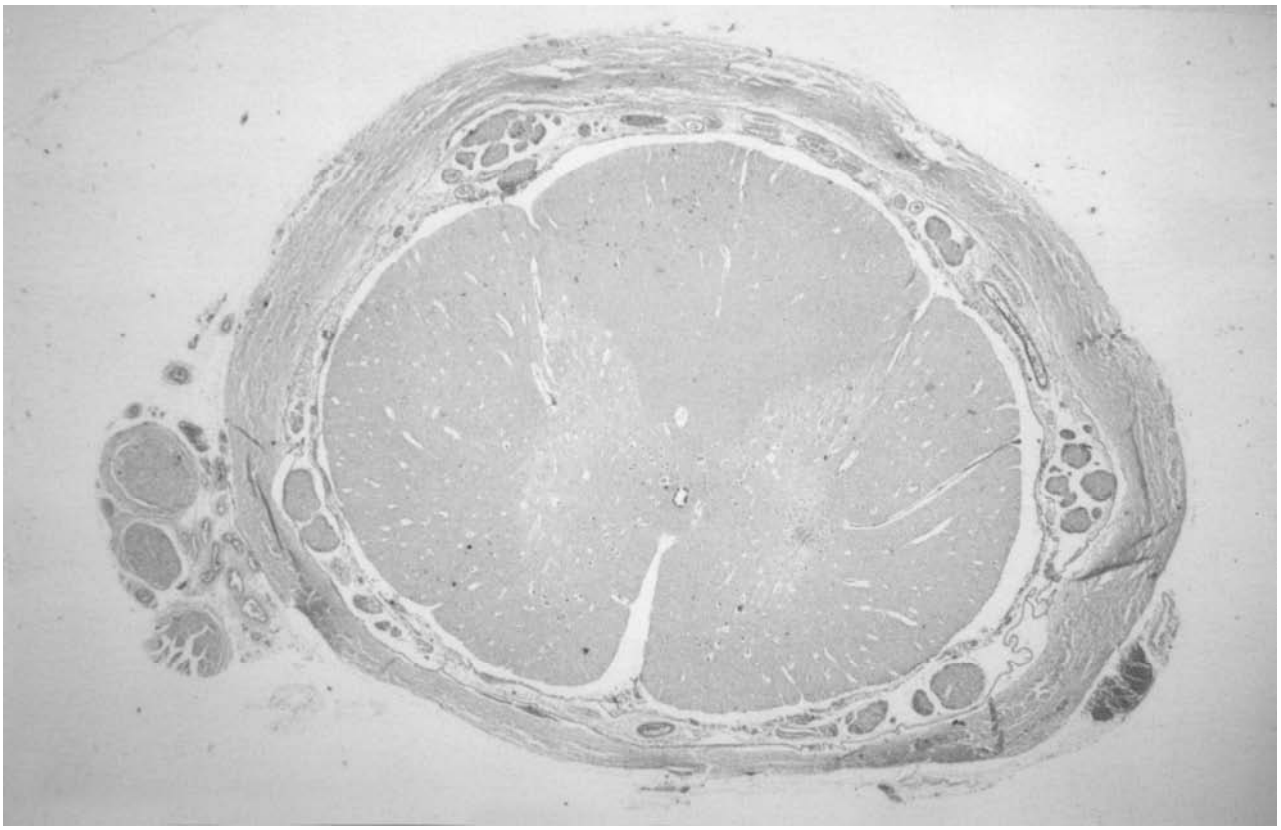

Figure 1: Transverse section of the spinal cord

(i) On Figure 1 use appropriate labels to indicate the exact locations of each of the following features:

(a) central canal	**(b) ventral median fissure**	**(c) meninges**
(d) ventral horn of grey matter	**(e) dura mater**	**(f) rootlets of spinal cord**

(ii) Comment on the distribution of white and grey matter in the spinal cord. How does this distribution differ from that in the brain?

(iii) On Figure 1, indicate where you would find the soma of motor neurons. Of what morphological type are these neurons?

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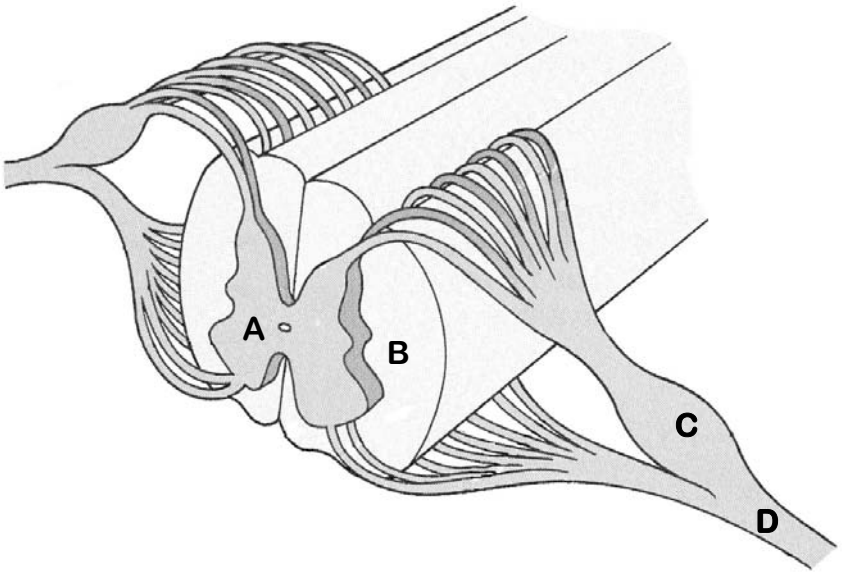

Figure 2: Diagrammatic representation of a segment of the spinal cord

(iv) What components of nervous tissue (e.g. cell types, parts of cells) are found in the regions/structures labeled A-D on Figure 2? Be as specific as you can with your identifications of components.

Region A:	**Region B:**
Region C:	**Region D:**

(v) On Figure 2, draw and accurately label motor and sensory pathways relaying information between the spinal cord segment and a skeletal muscle. Indicate the locations of the cell bodies of each neuron in the pathway. How does a motor pathway to smooth muscle in a blood vessel supplying the skeletal muscle differ from that to the skeletal muscle fibres themselves?

Q2. List up to three (3) learning objectives addressed in this RSD task.