**Membrane and transport 1**

**Key concepts or terms**

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| Plasma membrane |  |
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| Fluid mosaic model |  |
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| Movement of materials |  |
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| Tonicity |  |
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|  |  |
|  Osmosis |  |
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|  |  |
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| Passive transport |  |
|  |  |
|  |  |
| Diffusion |  |
|  |  |
|  |  |
| Facilitated diffusion |  |
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| Transport protein |  |
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| **SUMMARY** |  |
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The Cornell Note-Taking System:

1. Use 8 1/2 by 11 paper to create note sheet. Down the left side, draw a vertical line 2 1/2 inch from the edge of the paper. End this line 2-inches above the bottom of the paper. Draw a horizontal line across the bottom of the paper, 2-inches above the paper's edge.

2. In the narrow (2 1/2") column on the left, you will write cue words or questions. In the wide (6") column on the right, you will write lecture notes.

3. In the space at the bottom of the sheet, you will summarize your notes.

There are two versions of the Cornell System:

First Version is **the Six R Version**:

\* Step 1: **Record**

In the wide column, record as many facts and ideas. Use telegraphic sentences by leaving out unnecessary words. Use the key words only. Grammar rules are ignored. Write down a streamlined version of the lecturer's key points.

Step 2: **Reduce**

Reread your notes and rethink the entire lecture. Reduce each fact and idea in your notes to key words and phrases. Column on the left write down cue words: the word or phrase that you extracted from the fact or idea. The key words or phrases will act as memory cues. Column on the left write down cue words.

Cue Words: are key words or phrases written in the 2 1/2" column that act as cues to help you recall a full fact or idea.

Step 3: **Recite**

Cover up the wide column of your note sheet, exposing only the cue words or questions in the narrow column. Read each cue word or question out loud. Then, in your own words, the answers to questions, facts, or ideas indicated by the cue words.

Step 4: **Reflect**

Reflection is thinking about and applying the facts and ideas that you have learned. Reflect on the material by asking yourself questions, such as these: What is significance of these facts? What principles are they based on? How can I apply them? How do they fit in with what I already know? What is beyond these facts and principles?

Step 5: **Review**

The best way to prepare for examinations is to keep reviewing and keep reciting the set of notes that you will be held responsible for. Every evening, before you settle down to study, quickly review your notes. Pick up a designated set of notes and recite them. Short, fast, frequent reviews will produce far better understanding and far better remembering than long, all-day or all-night sessions can.

\* Step 6: **Recapitulate**

Recapitulate is a sure fire way to gain a deep understanding of facts and ideas in your notes, and reviewing summaries makes studying for exams a breeze. Take the time to summarize your notes, your understanding deepens - you have the whole picture instead of an assortment of facts. Write your summary in the space below the horizontal line at the bottom of the note sheet.

Summarize according to one of these plans: 1. Summarize the content of each note sheet. 2. Summarize the content of the entire lecture on the last note sheet for that lecture. 3. Do both 1 and 2.

The third option yields the greatest reward. When you review your notes for exams, you'll be able to see the step you took to arrive at your final, lasting page summary.

Second Version is **the one Q/Five R Version**:

\* Step 1: **Record**

In the wide column, record as many facts and ideas. Use telegraphic sentences by leaving out unnecessary words. Use the key words only. Grammar rules are ignored. Write down a streamlined version of the lecturer's key points.

Step 2: **Question**

Reread your notes and rethink the entire lecture. Then formulate questions based on your notes. Column on the left write down - opposite the fact or ideas in your notes - write a brief question that can be answered with the information in your notes. Writing questions helps to clarify meanings, reveal relationships, establish continuity, and strengthen memory. It also sets the stage for studying for exams.

Step 3: **Recite**

Cover up the wide column of your note sheet, exposing only the cue words or questions in the narrow column. Read each cue word or question out loud. Then, in your own words, the answers to questions, facts, or ideas indicated by the cue words. Cue Words: are key words or phrases written in the 2 1/2" column that act as cues to help you recall a full fact or idea.

Step 4: **Reflect**

Reflection is thinking about and applying the facts and ideas that you have learned. Reflect on the material by asking yourself questions, such as these: What is significance of these facts? What principles are they based on? How can I apply them? How do they fit in with what I already know? What is beyond these facts and principles?

Step 5: **Review**

The best way to prepare for examinations is to keep reviewing and keep reciting the set of notes that you will be held responsible for. Every evening, before you settle down to study, quickly review your notes. Pick up a designated set of notes and recite them. Short, fast, frequent reviews will produce far better understanding and far better remembering than long, all-day or all-night sessions can.

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Summarize according to one of these plans: 1. Summarize the content of each note sheet. 2. Summarize the content of the entire lecture on the last note sheet for that lecture. 3. Do both 1 and 2.

The third option yields the greatest reward. When you review your notes for exams, you'll be able to see the step you took to arrive at your final, lasting page summary.

\* Notes made in class is Step 1 and the summary written during study time is Step 6 are placed in the wide column of the note sheet.

Which version is better? Give each one a try, and see which one works best for you.