

## **Formative Assessments (10%)**

**Goal:** The purpose of these assessments is to help you process and integrate the knowledge from this class to prepare you for the midterm and final exams. These assessments will help you clarify the material and are intended as a study tool.

### **Types of Formative Assessments (FA):**

#### ***Concept maps***

A concept map is a visual representation of a series of ideas related to a given topic.

You should start by creating a list of all the ideas/concepts that are related to your topic. Then you should try to group and link them together in ways that make sense. You should use circles, boxes, or other shapes to delineate these different ideas and link them to each other with lines or arrows to indicate relationships.

The McGill Library has a helpful website to guide you in creating a concept map:

<http://libraryguides.mcgill.ca/conceptmapping/home>

Ways to create & upload a concept map:

- Drawing it on a piece of paper and uploading a picture (make sure it's a clear picture)
- Using software (PowerPoint, mind mapping software, concept map-making software, etc.) to create an electronic version of a concept map

#### ***Cartoon diagrams***

This type of FA requires you to create cartoon diagrams of various aspects of immune responses.

You should create representations of the different cells, proteins, molecules etc. that are involved in the specific assignment, and illustrate how they interact in time and space. What is the order of events? Which factors are involved, and what actions do they have?

These diagrams should include the types of elements that you see in the figures you find in your textbooks. They should not be a copy of the figures in the textbook! You should be constructing your own and using this as an opportunity to integrate the material. Examples will be posted to MyCourses.

Ways to create & upload a cartoon diagram:

- Drawing it on a piece of paper and uploading a picture (make sure it's a clear picture)
- Using software (PowerPoint, other graphic software, etc.) to create an electronic version of a cartoon diagram
- I do not expect artistic mastery in these diagrams, if you can draw circles or ovals, you can make a cartoon diagram.

### ***Problem-solving questions***

This type of FA requires you to create a multiple-choice question that requires problem-solving. These should not be basic “remember” questions or general conceptual questions. To select the right answer, a student solving this question would need to think about a problem, analyze a situation and/or apply knowledge in a new scenario.

You may use figures in your question, including data from peer-reviewed papers (please include a reference if you do). You can create hypothetical scenarios, develop clinical cases, pose an experimental question, etc.

You must:

- Provide 5 answers (a, b, c, d, e)
- Indicate which is the correct answer
- Provide reasonable “distractors”

Two examples of an inappropriate question:

1. Which of the following is not an animal?
  - a) An elephant
  - b) A cat
  - c) A chair**
  - d) A lizard
  - e) A bird

\*This question is a basic and easy remember question.

2. What is the most appropriate definition of a winter boot?
  - a) Something that is worn on the feet
  - b) A covering for feet that is generally constructed to withstand the cold and repel moisture**
  - c) Glasses that are tinted and worn to protect the eyes from sunlight
  - d) A chocolate sundae
  - e) All of the above

\*This type of question is sometimes used to test conceptual knowledge. In this case, answer “a” is partially correct, but not the most appropriate. This is an acceptable distractor. “c” is another definition, which can sometimes be an appropriate distractor. “d” is clearly not an appropriate distractor. “e” – anything with “all of the above” or “answers a and c are correct” will not be accepted for this assignment.

### ***Summarize for a lay audience***

The goal of this type of FA is to write a news article or other written document (blog post, brochure, etc.) aimed at a segment of the lay public about a topic in immunology. It should only be a paragraph long and it should be engaging and written in a way that will interest non-scientists. Avoid jargon! Explain things as simply as possible and aim to tell a compelling story. Imagine you are writing this for your (non-scientist) parents, aunt/uncle, cousin, roommate, or friend. **Thus, your audience has a basic biology background (i.e. know what DNA, protein, and the central dogma are).** In your written assignment, you

must put in brackets which lecture and slide your descriptions came from. For instance, “the immune system must be very adaptable to fight against a wide variety of invaders (lecture 1, slide 5).” If the references are not included, marks will be deducted.

### **Rubric:**

Each regular FA will be marked according to the following rubric:

- 2: FA is excellent, detailed, and complete. Names of group members included, if applicable
- 1.5: FA is very good but missing (a) key element(s)
- 1.5: FA is very good and has all key elements but a classmate mentioned your name as a group member and you did not (group member name(s) excluded)
- 1: FA was submitted but incomplete
- 0: Does not meet the basic requirements OR not submitted

A late FA loses 1 point. Note that you can submit late FAs at any time.

### **Points system:**

The Formative Assessments are worth 10% of your final mark. You can choose from the list of Formative Assessments below, each of which is worth 2 points. You can **accumulate** up to 10 points to fulfill the 10% requirement for Formative Assessments in this course.

Each FA is graded out of 2, and you can accumulate up to 10 points. As an example, if you got 1 point for one FA, but 2 points for five other FAs, you will get the full 10 points for the FA portion of your grade. If you don't get perfect marks on an FA, you can do another one and accumulate points during the semester. You have many opportunities to achieve full marks, so please do not get discouraged if you don't get 2/2 on an FA.

You can choose which FAs to complete. This choice allows you to plan your semester and distribute your workload and places the responsibility for doing so in your hands. *Note: one point is docked for a late FA.*

I encourage you to complete **all** the Formative Assessments since they are designed to help you keep up with the material and study for the exams. Students who complete ALL the Formative Assessments will be entered into a draw to win a prize at the end of the semester.

### **Policy on working with peers:**

You are encouraged to work on these Formative Assessments in study groups. If you do so, please indicate the names of the members of your study group on your submitted assessment. ***Note that you are expected to hand in your own work, and not simply copy/paste the work of others. McGill's Policy on plagiarism and academic integrity applies.***