

First Name (Print): _____ Last Name (Print): _____

Student Number: _____



**Irving K. Barber Faculty of Science
COSC 122 Final Exam (Practice)**

Instructor: Dr. Bowen Hui
Tuesday, December 09, 2025
Time: 12:00 pm (noon) - 1:30 pm

Instructions:

This is a closed-book exam. No calculators are allowed. Turn off your cell phone and put it away. Have your student ID card out on your desk.

This exam has 2 pages (excluding this cover page).

Question	Score	Possible Marks
Question 1		2
Question 2		2
Question 3		2
Question 4		2
Question 5		2
Question 6		2
Question 7		7
Question 8		6
Total		25

Question 1.

What is the computer's CPU responsible for and how does it work?

Grading scheme:

- [1 pt] CPU responsibility
- [1 pt] How it works

Question 2.

Recall that images are made up of pixels. Draw a picture of a circle and show how the pixels make up the circle. For simplicity, assume the image has 6 x 6 pixels. Colour in the pixels that make up the line of the circle, but do not colour in any of the pixels inside the circle. Lastly, explain how the representation of a circle cannot be truly "round" as we would draw it on a piece of paper.

Grading scheme:

- [1 pt] Correct image
- [1 pt] Explanation about curves

Question 3.

Four friends, Ada, Bob, Cam, and Don, decided to move into the same house together. Each of them has one desktop computer for work that requires a stable Internet connection without relying on wireless technology. Both Ada and Bob have a personal laptop that can use wireless technology to access the Internet. Cam has a printer for private use. How should these machines be connected? Draw a diagram with boxes as computers or laptops, solid lines as wired connections, and dashed lines as wireless connections. Label and annotate your diagram as needed.

Grading scheme:

- [1 pt] Computer connections
- [1 pt] Laptop and printer connections

Question 4.

Suppose you are building an HTML page that has some text and images. In your current folder, you have a subfolder called `images` where all the files for the images are located. You wish to display an image called `funEmoji.png` at the end of a sentence on the page. Write the HTML code required for including this image on the HTML page.

Grading scheme:

- [1 pt] Image tag
- [1 pt] File reference

Question 5.

Explain the purpose of JavaScript when it is used in websites. Consider the following in your answers: What kind of websites can you make with only HTML and CSS, and what kind of websites can you make if you add JavaScript?

Grading scheme:

- [1 pt] Purpose of JavaScript
- [1 pt] Websites with and without JavaScript

Question 6.

What is Searle's Chinese room argument and how was it used to argue against computers being intelligent? In your answer, explain the setup of the Chinese room as well as the logic of the argument, and how that aligns with a computer's ability to understand information.

Grading scheme:

- [1 pt] Explanation of the argument
- [1 pt] Relation to intelligence

Question 7.

Using HTML and JavaScript only (i.e., no CSS required), write the **complete** program that asks a user for a number, n . If n is less than 1 or greater than 10, set n to be 10. Then multiply the number by 5, then subtract 3, and lastly divide by 2. Create a variable to store this answer and display it back to the user in an embedded message beginning with "Your answer is " with the calculated answer included. For example, if you enter 4 in this program, it will print "Your answer is 8.5".

Grading scheme:

- [1 pt] General program format
- [1 pt] Getting user input
- [2 pts] Setting input value if necessary
- [2 pts] Correct calculation
- [1 pt] Message displayed to user

Question 8.

AI can be used to advise people, make suggestions for solving their problems, come up with text, pictures, and sounds people have never seen before, and more. Is AI truly *creative*? Pick a side and clearly state your position, then argue with an explanation based on the knowledge you have gained in this class. Situate your argument based on what AI is **today**, and not what it could potentially be in the future. Give a clear example to illustrate how AI supports your claim. In your argument, incorporate ideas such as how computer programs work, content novelty, content ownership, and artificial versus true intelligence, as evidence to support your claim.

Grading scheme:

- [1 pt] Clear positioning statement about your belief
- [1 pt] AI example illustrating your belief
- [2 pts] Class knowledge in relation to creativity
- [2 pts] Logical argument to justify belief statement