CS 205 Midterm Exam: D. Hepting February 28, 2018, 8:30–9:20, CL 417

This is a closed book exam. You must maintain the confidentiality of your examination; do not provide any opportunity for others to copy any of your work. Electronic devices are NOT permitted during the exam. Please turn off and put away all cell phones and other electronic devices during the exam period.

ANSWER ALL QUESTIONS. All answers must be written on this exam in the space provided. You have 50 minutes to complete the exam. Please plan your answers, favour quality over quantity, do not exceed the space provided, and do your best to write legibly. QUESTIONS ARE ON BOTH SIDES OF THE PAPER.

This exam contributes 10 percent towards your final grade. There are 20 marks total on this exam. Good luck.

Name (printed):

Student Number: _____ --- ____ ___ --- ____ ____

Signature:

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PART 1: 4 questions, 2 marks each = 8 marks

Q1-1. Describe additive and subtractive colour models. Identify an example of each.

Q1-2. What is a pixel? What does it have to do with aliasing?

Q1-3. Why can entropy be considered positively? What does it have to do with compression?

Q1-4. What is a colour gamut and how is it determined?

PART 2: 2 questions, 6 marks each = 12 marks

Q2-1. Describe the relationship between Unicode and UTF-8. Why is UTF-8 popular? Include an example that describes encoding and decoding.

Q2-2. Explain the space/time tradeoffs between vector and bitmap images. What is an example of an application where each type (vector, bitmap) would be preferred?

(SPACE FOR ROUGH WORK)