Physics 121       Final Exam

Due: Wednesday, May 19       11:59 PM
Send to: sfsuastro@gmail.com

Exam Format

This exam will be Open Book and Open Notes. Students may use formulas and information from their textbook and use notes they took while viewing lectures. They may also access the lecture notes posted on the class website, and review the video lectures.

However, students may NOT consult any other internet resources, and may NOT discuss the exam with fellow students. The exam will be multiple choice only (no short answer).

It is expected that students complete the exam in 120 minutes time\(^1\), but this limit will not be strictly enforced. Students may take the exam at any time after the exam is made available, and may submit it at any time before 11:59 PM on the due date. However only ONE submission per student is allowed.

There will be about 24 questions. See list of topics below.

Cheating Policy

This exam is being held online due to the COVID pandemic. Any unscrupulous student who tries to take advantage of these tragic circumstances by cheating on an exam will receive zero credit for the exam. Their name will be referred to the Office of Student Conduct for disciplinary procedures, They will also receive the scorn of all honest, hard working fellow students.

\(^1\) DPRC Students extended time arrangements should be added to this figure, per their accommodation agreement
Physics 121       Final Exam

Students must submit their answers by email to: sfsuastro@gmail.com in the correct format.

IMPORTANT!!!! READ CAREFULLY!!!: your exam must be formatted correctly, or you may not receive credit. You should submit your exam in the body of an email MESSAGE (not an attachment) sent to: sfsuastro@gmail.com The email should contain the word “Name:” followed by your name and the word “ID:” followed by your ID number. Next, your email should contain numbers for each question, followed by a period, and the letter of your multiple choice answer, like this:

Name: Chris McCarthy
ID: 987654321

1.) B
2.) D
3.) D
4.) A
5.) B
6.) D
7.) D
8.) A

etc..

Please include a space after the parenthesis, and not a TAB character. (Your exam will be read by a computer program, and I want to ensure that you get full credit for your answers.)

Most of the exam will concern the topics below, which come from AFTER the second midterm. However some of the exam (up to 1/3 at most) will cover earlier topics. See review sheets for those exams to review these topics.
TOPICS


**Chapter 28**: Superposition of waves, Constructive & Destructive Interference, Double Slit experiment.

**Chapter 29**: Postulates of Special Relativity, time dilation. Length contraction, $E=mc^2$, Mass energy equivalence, General Relativity

**Chapter 30**: Planck’s Quantum Hypothesis, Photons. De Broglie hypothesis, Wave Particle Duality. Heisenberg Uncertainty Principle, Quantum Tunneling.

**Chapter 32**: Atomic nuclei, Radioactivity. Nuclear reactions: alpha, beta, gamma decays.

**Not on test:**

Sections 27-5, 28-5, 28-6, 29-5, 30-4, 30-2,4,5,8 & 32-3,4,5 Chapters 27 & 31 were NOT covered.