

Exam Report

Module Code/Title: Phys6014

Module Leader: Antonios Kanaras/Iris Nandhakumar/Sumeet Mahajan

Feedback comments:

At the following sections we give detail feedback for each exam question. Overall, the students did very well in the exam (success rate was 100% and the average mark was 65%).

Section A

A1 (IN): The majority of students answered this question correctly and score full marks.

A2 (IN): Most students were able to answer this question without any problems, however some were not able to state the correct energies for TEM and stated that for SEM.

A3 (SM): Most students answered this question. The part on Raman spectroscopy almost everyone got it correct. For the second part there was quite a variation with quite a number of students either mentioning the permeability relationship from the Drude model or did not give a direct answer to the question on the role of refractive index.

A4 (AK): Most of the students replied to this question. Few students were confused between the terms phase stability and phase transition.

A5(AK): Most of the students engaged in this question, however few students did not get all the marks because they did not name all the three synthetic methods involving the bottom up approach.

Section B

The majority of the students chose the questions B1 and B3. The questions were properly shuffled to include a balance between the different parts of the course.

B1a (AK): Some students confused the electronic states of metal and semiconductors. Some of them lost marks because they did not draw the emission spectrum of the dots.

B1b (AK): Only very few students confused the rules applied to the optical properties of nanoparticles and did not answer the question properly. The main body of the class were highly engaged and properly replied to this question.

B1c (IN): Surprisingly quite a high number of students were struggling with this question and scored only half of the marks

B2a (SM): Relatively less number of students attempted this question. However, those who did answered it reasonably well. There was some confusion with the units.

B2 b (AK): Most of the students that chose this question they gave satisfactory answers.

B3 a (AK): Almost all the students replied very well to this question which shows that they understood one of the most important milestones of the module.

B3 b (IN): A high proportion of students performed the calculation with that for a particle in a one dimensional box even though the question clearly stated a particle in 2D box.