Dr. Quark

Dr. Quark is a new faculty member who teaches Physics 200, Quantum Physics. He has taught physics for several years at a small military academy and is accustomed to all-male classes. This is his first experience teaching at a large university. Out of 40 students, he notices, the class contains at least five or six women. Although Physics 200 is one of the smallest classes that students will have taken in the major up to this point in the curriculum, the class feels quite large to him. Because he does not know how else to cover the extensive materials in the syllabus, he tells his students on day one that he will need to lecture extensively and will only be able to take questions the last couple of minutes of every class. He suggests that students come to his office hours to ask questions he is not able to address in class.

Jennifer Meson, a sophomore-level physics major, is one of the few women in Dr. Quark’s class. At mid-term, Jennifer is doing pretty well in the class; so far she has gotten A’s, and she credits this to studying with several of her female classmates. In today’s class Dr. Quark is discussing Schrödinger’s wave equations. He finishes class with only a few minutes to spare and asks, “Does anyone have questions?” One female and two male students raise their hands. He selects one of the male students, who poses two questions. Consequently, he does not leave himself time to recognize the female student. Jennifer is disappointed, as she finds that her female classmates often pose questions about things she wants to know but can’t think how to ask. Not to be discouraged, however, Jennifer decides to go to Dr. Quark’s office hours for the first time, as her study group can’t meet this afternoon.

When Jennifer arrives at his office, she notices he is talking to Jon, the same student who asked questions in class earlier that day. He and Jon are engaged in an in-depth discussion about quantum chromodynamics, a topic they will not get to until near the end of the semester. They do not see Jennifer waiting in the hallway. Jennifer cannot help but notice the rapport between Dr. Quark and Jon. They seem to be talking so smoothly and comfortably. As she watches the two of them she thinks, “He is really taking his time and answering Jon’s questions.” After spending some time at the chalkboard working out an equation for Jon, Dr. Quark sees Jennifer and begins to conclude the discussion. He says, “Well, we’ve been talking for almost 45 minutes, and there’s another student from class waiting, so we’d better call an end to it for the day! Feel free to drop in next week, Jon, if you have any other questions.”

He says hello to Jennifer as she enters and offers her a seat in the chair across from his desk. Awkwardly, and to break the ice, he asks, “Do you know, Miss . . . ?”

“Meson,” says Jennifer, quickly filling in the blank.

“Do you know, Miss Meson, that that fellow is one of the brightest students in the class?” Jennifer shakes her head no, and he continues quickly, “Oh, yes! If you need a good study partner, do consider looking him up. He’s got a first-rate mind for science. Now then, how may I help you?”

Jennifer says, “I wanted to talk with you about Schrödinger’s wave equations, Dr. Quark. I don’t think I completely understand them, and I’d like to go over them with you.”

He sits back in his chair, crosses his arms, and says, “Ah, well then, what don’t you understand? Let’s see how I can help you.”

“Well, I’m really not sure whether I understand the equations or not, you see? That’s why I’m here. I thought maybe I could explain them to you in my own words, writing them out on the board, and that you could tell me whether or not I’m right, and if I’m not right, where I get off
track. I’m sure I’ll think of questions as I talk through the equations, but I didn’t actually come with a list of questions.”

“Oh, okay. That’s certainly doable,” says Dr. Quark, clearing his throat and unconsciously glancing at his watch. “You do realize, I hope, that tonight’s scheduled exam review is precisely for these kinds of drills and just the sort of thing that the teaching assistant who’ll be leading the review session is prepared to help you with.”

Unsure of how to respond, Jennifer says, “Oh. I guess I hadn’t thought of that, but I suppose I could wait. It’s just until tonight, after all.” Standing up to leave, she continues, “I’m sure the TA at the exam review will let me work a problem or two using the equations. He’s very nice, of course. And if I still don’t understand, I’ll ask Mandy or one of the others in my study group when we meet tomorrow. The test isn’t until Friday.”

Rising quickly and realizing his error, Dr. Quark apologizes: “I’m so sorry, Miss Meson, I didn’t mean to imply that I wouldn’t be happy to do this myself, and I do have plenty of time before my next class. It’s just that I thought your classmates in the exam review might benefit from this kind of activity, but that’s not to say that I wouldn’t as well. So please do stay and write your equations for me.”

“No, really, I’m sure you’re right, and thanks for the suggestion,” says Jennifer, quickly leaving the office and hoping he hasn’t noticed that she’s close to tears.
QUESTIONS ABOUT DR. QUARK CASE

1. What about this particular teaching situation might be making Dr. Quark nervous or uncomfortable? What’s new for him?

2. In what ways is Jennifer taking care of her own learning needs? How does she communicate these needs to her instructor?

3. What mistakes does Dr. Quark make? What can he do, if anything, to repair the damage from this first awkward consult with Jennifer?

4. What will be the likely effect of this encounter on the other female students, should Jennifer choose to tell them about it? And if the word gets out to male students in the class?