

**RAD 201 – Medical Imaging I
Course Outcome Goals**

Fall 2014

Final Exam Question	Result
#17 pertaining to pathology	23/24 96%
#127 pertaining to generator and density	22/24 92%
#136 pertaining to contrast	22/24 92%
#149 pertaining to detail	24/24 100%
#179 exposure factor conversion	12/24 50 %

Question 179:

An anteroposterior (AP) radiograph of the femur was made using 300mA, 0.03s, 76kVp, 40-inch SID, 1.2-mm focal spot, and a 400-speed film-screen system. With all other factors remaining constant, which of the following exposure times would be required to maintain radiographic density at a 44-inch SID using 500mA?

- a. 12ms **b. 22ms** (answer) c. 30ms d. 36ms

Student responses: a. – 6 students, b.-12 students, c.-1 student, d.-5 students

Need to complete three calculations to arrive at the solution.

Step 1 – calculate new mAs needed for SID change: answer - 11 mAs.

Students may have completed the first step and selected 12 ms for 12 mAs and did not complete the remaining two steps.

Step 2 – calculate time needed to produce 11 mAs at 500 mA: answer - .22 sec.

Step 3 – calculate time in milliseconds: answer – 22ms

Recommend additional practice doing multiple exposure factor change problems.

Exam averages: Exam 1, chapters 19-22 – 86.67
Exam 2, chapters 23-25 – 90.58
Exam 3, chapters 26-29 – 86.04
Exam 4, chapters 30-34 – 88.04
Final exam – 83.13

Course Average: 88.16

Completion: 100% (24/24 students)

Grade distribution: A-5, B-11, C-8