

Examples of the Final Exam and Some of its Sections

Exam has questions in the following area: Physics of Nuclear Medicine, Radiation Units, Radiation Protection, and Instrumentation. Related to Imaging you will need to know: Bone, Lung, Thyroid, Cardiac, Heart, Kidney, Brain, SPECT, and PET.

Physics of Nuclear Medicine

1. Two isotopes such as ^{131}I and ^{123}I , has the same amount of (**protons / neutrons**).

Radiation Units

2. 1 Gy = _____ RAD.

Instrumentation

3. The crystal in a gamma camera is made up of _____.

Radiation Protection

4. If there is 100 mr/hr source, what is your total exposure for 15 minutes _____mr.

Clinical Nuclear Medicine – each clinical section may have 3 - 4 related questions.

5. When imaging for bone infection the procedure is (**whole body / 3-phase**)
6. (**123 / 131**) - Iodine is the preferred agent for uptake and scan.
7. Redistribution is best seen with (^{201}Tl / $^{99\text{m}}\text{Tc}$ -myoview).
8. PET uses (**BGO / NaI(Tl)**) crystals.
9. In a normal patient, the excretion portion of a time-activity should reach 50% within (**10 / 20 / 30**) minutes.
10. RES includes which organs of the body? _____, _____, and _____.
11. Calculating the %EF of the GB is used to determine (**Acalculus / Acute**) cholecystitis.

Match the procedure to the right radiopharmaceutical.

There are four calculations that are related to the following: radiation safety, cardiac, and/or gall bladder.

There will be an extra credit question or two.

Finally – Overall math calculations will not be as difficult as what we cover in class. At least that is my opinion.