

Al-Balqa Applied University
Nuclear Physics 501503742
Level Test

Dr. Saed Dababneh

February 2010

- *This is not intended to be a marked exam.*
 - *The purpose is to collect information about your background.*
 - *You are NOT required to write your name, but you can do so if you wish.*
-

1- List all nuclear and/or radiation physics courses you have previously studied. Mention the level of the course (third year, fourth year, graduate, *etc.*...). What are the main titles that you can remember from each course? What were the texts that you used?

2- Write down whatever you know about secular equilibrium.

3- What is ...

- a) Bremsstrahlung?

- b) Energy straggling?

- c) Kinematic collimation?

- d) Time-of-flight technique?

- e) Isotopes, Isotones, Isobars, Isomers?

>> go to page 2 >>

4- What are the main types of interaction between gamma photons and matter? Briefly comment on them.

5- What are the terms of the semi-empirical mass formula?