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COURSE TITLE: MEDICAL PHYSICS

1. WHAT ARE RADIOACTIVE TRACERS?

A radioactive tracer is a chemical compound in which one or more atoms have been replaced by a radionuclide so by virtue of its radioactive decay it can be used to explore the mechanism of chemical reactions by tracing the path that the radioisotope follows from reactants to produce.

1. DISCUSS EXPLICITLY ONE APPLICATION OF TRACER IN MEDICINE.

Nuclear medicine uses radiation to provide information about the functioning of a person’s specific organs or to treat diseases. In most cases the information is used by physicians to make a quick diagnosis of the patient’s illness. The thyroid, bones, heart, liver, and many other organs can be easily imaged, and disorders in their function revealed. In some cases radiation can be used to treat diseased organs or tumors. Five Nobel laureates have been closely involved with the use of radioactive tracers in medicine. Nuclear medicine was developed in 1950s by physicians with an endocrine emphasis, initially using iodine-131 to diagnose and then treat thyroid