

**DIPLOMA IN MEDICAL RADIO DIAGNOSIS (DMRD)  
EXAMINATION**

**MEDICAL RADIATION PHYSICS AS APPLIED TO RADIO DIAGNOSIS**

*Q.P.Code: 343019*

**Time: Three Hours**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(2 x 15 = 30)**

1. Describe the main components of MRI equipment. Enumerate the routine sequences used in MRI imaging and their significance.
2. Describe the principles of PET CT. Give an account of properties of the common radionuclides used and their clinical significance.

**II. Write notes on:**

**(10 x 7 = 70)**

1. Discuss space charge effect.
2. Discuss heel effect.
3. Automatic film processor.
4. Rotating Anode.
5. What are the sequences used to study flowing blood by MRI? Briefly discuss advantages of each method.
6. Discuss the safety precautions to be taken during imaging of a pregnant or lactation woman in a radiodiagnostic department.
7. Classify contrast media related adverse reactions and briefly describe their management.
8. What is Dual energy CT? Compare it with regular CT technology.
9. Different ultrasound frequency probes.
10. Principles of molecular imaging.

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