## DIPLOMA IN RADIOLOGY & IMAGING TECHNOLOGY (Regulation for candidates admitted from 2014-2015 session onwards) PAPER II – RADIO DIAGNOSTIC EQUIPMENTS – INSTRUMENTATION, RADIATION, SAFETY & QUALITY CONTROL

Q.P. Code: 363602

Time: Three hours Maximum: 100 marks

I. Elaborate on:  $(2 \times 20 = 40)$ 

1. Explain MRI Instrumentation in detail.

2. Explain planning of X-ray installation as per AERB guidelines.

1. Describe Kilo Voltage (KV) control circuit in X-ray production.

II. Write notes on:  $(10 \times 6 = 60)$ 

- 2. Write note on Exposure Timers and its types.
- 3. Discuss about Automatic Exposure control.
- 4. Discuss solid state CT detector.
- 5. Discuss about MRI safety and shielding.
- 6. Write a short note on PET CT Artifacts.
- 7. Write about the responsibilities of RSO according to Radiation Protection Rules.
- 8. Define Use factor and Occupancy Factor.
- 9. Write about types of Packages for Radioactive Sources.
- 10. Explain Congruence of Radiation & Optical field & Test for Central Beam alignment in X-ray Quality Assurance.

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