

M.D. (RADIOLOGICAL SCIENCES) : SUMMER - 2018

SUBJECT: PAPER – I : BASIC SCIENCES, RADIATION PHYSICS, IMAGING TECHNIQUES.

Day: **Saturday**
Date: **02/06/2018**

S-2018-3399

Time: **2.00 P.M. TO 5.00 P.M**
Max Marks. 100

N.B.

- 1) Q. No. 1 and Q. no. 2 are **COMPULSORY**.
 - 2) Attempt any **SEVEN** questions from Q. no. 3 to Q. No. 10.
 - 3) Figures to the right indicate **FULL** marks
 - 4) Draw neat and labelled diagrams **WHEREVER** necessary.
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- Q.1** Discuss the basic construction of a rotating anode tube and recent advances in tube technology. (15)
- Q.2** Briefly outline the evolution of CT scanners until the present day, citing the key specific changes through different generations. What are the advantages of a multi-slice CT as compared to the conventional CT scan? (15)
- Q.3** MR coils. (10)
- Q.4** Sonosalpingography. (10)
- Q.5** MR enterography. (10)
- Q.6** MR contrast in liver imaging. (10)
- Q.7** What are the hazards of radiation? What steps would you take to protect yourself and reduce radiation dose to the patient? (10)
- Q.8** Nephrogenic systemic fibrosis. (10)
- Q.9** What is a grid? Discuss the use of grids in radiography (10)
- Q.10** AERB guidelines on X - Ray room installation. (10)

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