

M.D. (Radiodiagnosis) : SUMMER - 2019
SUBJECT : PAPER – I : BASIC SCIENCES, RADIATION PHYSICS,
IMAGING TECHNIQUES

Day : Saturday
Date : 01/06/2019

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

S-2019-3813

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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Long Answer Questions:

- Q. 1** Describe various measures to reduce the radiation exposure in patients as well as personnel performing fluoroscopically guided vascular interventional procedures in the DSA lab. **(15)**
- Q. 2** Describe the radiological anatomy of the mediastinum. Discuss the imaging features and differential diagnosis of posterior mediastinal masses. **(15)**

Short Answer Questions:

- Q. 3** Nuclear medicine in liver imaging. **(10)**
- Q. 4** Name the various interactions of X-ray photons with matter. Discuss any one. **(10)**
- Q. 5** Intravascular Ultrasound. **(10)**
- Q. 6** Principles of PET CT and evaluation in lymphoma. **(10)**
- Q. 7** Enumerate various MR contrast media. Briefly mention their mechanism of action. **(10)**
- Q. 8** Define film contrast. Enumerate various factors affecting film contrast. Briefly discuss the methods to improve contrast. **(10)**
- Q. 9** Define the PC and PNDT Act, its objectives, its target bodies and requirements. **(10)**
- Q.10** A patient develops severe hypotension immediately following the intravenous administration of an iodinated water-soluble contrast medium. How would you manage such a patient? **(10)**

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