

**D.M.R.D. : SUMMER - 2018**

**SUBJECT: PAPER – I – PHYSICS APPLIED TO RADIOLOGY AND IMAGING  
INCLUDING CONTRAST MEDIA**

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

**S-2018-3468**

**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 diagrams **WHEREVER** necessary

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**Q.1** Define Radiographic contrast. Describe various factors affecting radiographic contrast. **(15)**

**Q.2** With the help of diagrams describe the anatomy of the subarachnoid space. How would you investigate a case of non-traumatic subarachnoid hemorrhage? **(15)**

Attempt **ANY SEVEN** (10 Marks Each)

**Q.3** Write a short note on high resolution CT. **(10)**

**Q.4** Radiation safety measures in a fluoroscopy room. **(10)**

**Q.5** Physics of tissue harmonic imaging and its uses. **(10)**

**Q.6** Mammographic X ray tubes. **(10)**

**Q.7** Plain radiography of wrist joint. **(10)**

**Q.8** Discuss the radiological anatomy of the diaphragm and outline the imaging modalities to study the diaphragm. **(10)**

**Q.9** Discuss the techniques of MR angiography. Compare its merits and demerits with CT angiography **(10)**

**Q.10** Ultrasound of the spine **(10)**

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