

[LB 1012]

OCTOBER 2012

Sub. Code: 4016

**M.Sc (MEDICAL PHYSICS) DEGREE EXAMINATION
(Revised Regulations for Candidates admitted from 2010-2011)**

FIRST YEAR

Paper VI – PHYSICS OF MEDICAL IMAGING

Q.P. Code : 284016

Time : Three hours

Maximum :100marks

Answer All questions.

I. Elaborate on :

**Pages Time Marks
(Max.)(Max.)(Max.)**

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|--|----|----|----|
| 1. (a) Explain the importance of filtration in radiography, types of filtrations and how filters are used in shaping the X-ray spectrum? | 17 | 40 | 20 |
| (b) with the help of neat sketch explain the construction of radiographic film. | | | |
| 2. (a) Explain in detail about indirect and direct digital radiography. | 17 | 40 | 20 |
| (b) Give the details about the various instrumentations used in mammography. | | | |

II. Write Notes on:

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|---|---|----|---|
| 1. Rotating anode X-ray tube. | 4 | 10 | 6 |
| 2. Image intensifier. | 4 | 10 | 6 |
| 3. Limitations of projection imaging techniques. | 4 | 10 | 6 |
| 4. Automatic exposure control. | 4 | 10 | 6 |
| 5. Factors influencing the scatter radiation. | 4 | 10 | 6 |
| 6. Compare the Conventional and Rare earth screens. | 4 | 10 | 6 |
| 7. Factors influencing the radiographic contrast. | 4 | 10 | 6 |
| 8. Q.A in X-ray equipments. | 4 | 10 | 6 |
| 9. MRI safety. | 4 | 10 | 6 |
| 10. Color Doppler. | 4 | 10 | 6 |
