

B.Sc. RADIOLOGY IMAGING TECHNOLOGY
(New syllabus – 2014-2015)

THIRD YEAR

**PAPER III – QUALITY CONTROL, RADIOBIOLOGY AND RADIATION
SAFETY IN RADIODIAGNOSIS / IMAGING**

Q.P. Code: 801838

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on:

(3 x 10 = 30)

1. Explain about the somatic and genetic effects of radiation with example.
2. Discuss the personnel requirement and responsibilities given in AERB safety code for diagnostic radiology.
3. Explain in detail Thermo Luminescent Dosimeter with diagram and also mention the advantages over film badge.

II. Write notes on:

(8 x 5 = 40)

1. What are the sources of internal radiation exposure?
2. Light field and X-ray field alignment test.
3. Write the specifications for protective devices used in diagnostic radiology department.
4. Explain briefly about sources of background ionizing radiation.
5. Explain the film screen contact test.
6. Central beam alignment test.
7. Registration of X-ray unit with AERB.
8. Linearity of mA assessment.

III. Short answers on:

(10 x 3 = 30)

1. Write briefly about phantoms.
2. Location of X-ray unit and area requirement for radiographic procedures.
3. Use and features of gonad shield.
4. Cumulative dose, why is this relevant in radiation safety?
5. How to check performance of a lead apron periodically?
6. What is lead equivalence?
7. What is Roentgen?
8. Three principles of radiation protection.
9. International agencies responsible for radiation safety.
10. Warning light and Placard.
