

B.Sc. RADIOTHERAPY TECHNOLOGY
(New Syllabus 2014-2015)

THIRD YEAR

**PAPER III – QUALITY ASSURANCE, RADIOBIOLOGY AND
RADIATION SAFETY IN RADIOTHERAPY**

Q.P. Code: 801938

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on:

(3 x 10 = 30)

1. Discuss in detail about the acceptance test procedures of a Linear Accelerator machine installed in a radiotherapy department.
2. Discuss about Electronic Portal Imaging Device in modern era.
3. Discuss in detail about the acceptance test procedures of a simulator installed in a radiotherapy department.

II. Write notes on:

(8 x 5 = 40)

1. Congruence test procedure for Optical field and Radiation field.
2. Output calibration of a Linear accelerator.
3. Autoradiograph test for a Brachytherapy machine.
4. Specific QA tests to be done on Co-60 teletherapy machine.
5. Emergency procedures to be followed in brachytherapy.
6. Somatic effects and hereditary effects.
7. Film badge.
8. Pocket Dosimeter.

III. Short answers on:

(10 x 3 = 30)

1. Define Isocenter.
2. Define Percentage depth dose.
3. Define Monitor units.
4. Wedge transmission factor.
5. Optical Distance Indicator.
6. What is swipe test performed in brachytherapy?
7. Define MLC.
8. What is effective dose?
9. Define RBE.
10. Define LET.
