

B.Sc. IN MEDICAL IMAGING TECHNOLOGY

Term-End Examination

June, 2015

BAHI-031 : BASICS OF RADIOLOGICAL PHYSICS

Time : 3 hours

Maximum Marks : 70

PART - A

1. Fill in the blanks : **1x10=10**
- (a) In dry view camera films are processed by _____.
 - (b) Duplicating films are used for _____.
 - (c) IOPA films are used for _____ Radiography.
 - (d) _____ gives off focal radiation.
 - (e) Focusing cup of X-ray tube is made of _____.
 - (f) In developer PQ stands for _____.
 - (g) Selenium is used in _____ detectors.
 - (h) Walls of dark room should be painted in _____ color.
 - (i) In CR , PSP stands for _____.
 - (j) In radiology department thin film transistors are commonly used in _____.
2. Write short-notes on the following : **2x5=10**
- (a) Materials used in rare-earth screens.
 - (b) Hardener in fixer solution
 - (c) Phenedone
 - (d) Speed of film.
 - (e) AgBr.

PART - B

Attempt **any four** questions.

5x4=20

3. Describe the maintenance protocols of automatic processors.
4. Describe construction and care of the CR cassette.
5. Explain basic structure of Indirect type DR Detector.
6. Describe the construction of X- Ray film.
7. Describe the role and function of gelatin in x-ray film.

PART - C

Attempt **any three** questions.

10x3=30

8. Describe in detail the construction and functioning of automatic processor.
9. Discuss in detail about the image acquisition and read out mechanism of CR system.
10. Explain in detail the advantages and the disadvantages of DR system.
11. Enumerate with relevant details the various types of Intensifying screens used in Radiology department.