

**BACHELOR OF SCIENCE (RADIOLOGY & IMAGING TECHNOLOGY) (CBCS-2019 COURSE)**

**B.Sc. (R&IM) Sem III : WINTER :- 2021**

**SUBJECT: BASIC IMAGING**

**Day : Thursday**  
**Date 17-02-2022**

**W-22512-2021**

**Time : 10:00 AM-12:00 PM**  
**Max. Marks: 60**

**N.B.:**

- 1) There are **THREE** sections as  
Section – A : Objective Type Questions : 20 marks  
Section – B : Long Answer Questions : 20 marks  
Section – C : Short Answer Questions : 20 marks
- 2) Section A is given on **SEPARATE** sheet and has to be answered on **SAME** sheet. This sheet should be completed within first **20** minutes of starting of the examination. The sheet with section A will be collected by Supervisor at the end of 20 minutes.
- 3) You have to make ☒ such kind of mark in the box of the appropriate answers.

**Seat No. \_\_\_\_\_**

**SECTION – A**

**M.C.Q's**

1. All of these increase spatial resolution in CR except:  
a) ☐ Smaller plate  
b) ☐ Larger pixel size  
c) ☐ Thinner phosphor plate  
d) ☐ Reduced phosphorous lag
2. The disadvantage of CSI over Gadolinium oxysulphide is  
a) ☐ Better resolution  
b) ☐ Fragile  
c) ☐ Efficient X-ray absorption  
d) ☐ Better quantum efficiency
3. Gadolinium oxysulphide is a  
a) ☐ Photoconductor  
b) ☐ Unstructured photoscintillator  
c) ☐ Photo stimulable phosphor  
d) ☐ Activator
4. In which format are radiological images obtained and archived?  
a) ☐ DICOM  
b) ☐ JPEG  
c) ☐ PDF  
d) ☐ XPG

**P.T.O.**

5. LASER is used in :
- a) ☐ Conventional radiography
  - b) ☐ DR system
  - c) ☐ CT
  - d) ☐ Dry film imaging
6. X – ray film can be converted into digital format with help of :
- a) ☐ CR
  - b) ☐ DR
  - c) ☐ Film screen system
  - d) ☐ Digitizer
7. Long distance tele-reporting is possible because of :
- a) ☐ DICOM
  - b) ☐ HMIS
  - c) ☐ RIS
  - d) ☐ PACS
8. Detection of over-exposure is difficult in CR due to :
- a) ☐ Plate readout by LASER
  - b) ☐ Poor image quality
  - c) ☐ Quantum mottle
  - d) ☐ Post-processing
9. Automatic stitching is useful in :
- a) ☐ Chest radiography
  - b) ☐ Abdomen radiography
  - c) ☐ Hip radiography
  - d) ☐ Whole spine radiography
10. What kind of characteristic curve does CR have?
- a) ☐ Linear wide latitude
  - b) ☐ Non-linear wide latitude
  - c) ☐ Linear narrow latitude
  - d) ☐ Non-linear narrow latitude

Total Marks Obtained : \_\_\_\_\_

Signature of Invigilator

Signature of Examiner

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- 1) There are **THREE** sections as  
Section – A : Objective Type Questions : 20 marks  
Section – B : Long Answer Questions : 20 marks  
Section – C : Short Answer Questions : 20 marks
  - 2) Section B has four long answer questions and any **TWO** questions have to be answered.
  - 3) Section C has six short answer questions and any **FOUR** questions have to be answered.
  - 4) Answers to both the sections should be written in **SAME** answer book.
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**SECTION – B**

**Long Answer Question:**

Attempt **ANY TWO** of the following:

**[20]**

- a) Write in detail about components of PACS.
- b) Write in short about following innovations in digital radiography:
  - i) Automatic image stitching
  - ii) Dual energy imaging
  - iii) Wireless flat panel detector
  - iv) Tomosynthesis
- c) Write in detail about DR system.
- d) Write a short note on DICOM.

**SECTION – C**

**Short Answer Questions:**

Attempt **ANY FOUR** of the following:

**[20]**

- a) Write in short about CR system.
- b) Write in short about dry films.
- c) Discuss differences between conventional radiography, CR and DR system.
- d) Write in short about advantages and disadvantages of PACS.
- e) Write in short about detectors in DR system.
- f) State some advantages of DR system.

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