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BACHELOR OF SCIENCE (RADIOLOGY & IMAGING TECHNOLOGY)(CBCS-2019 COURSE)
B.Sc. (R&IM) Sem-V : WINTER- 2022
SUBJECT : DIGITAL RADIOGRAPHY

Day : Friday

Time : 10:00 AM-12:00 PM

Date : 27-01-2023

W-22533-2022

Max. Marks : **40**

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- 1) There are Three sections as follows:
- | | |
|---------------------------------------|----------|
| Section- A - Objective Type Questions | 20 Marks |
| Section- B - Long Answer Questions | 20 Marks |
| Section- C- Short Answer Question | 20 Marks |
- 2) Section B has four long questions and ANY TWO have to be answered.
3) Section C has six short questions and ANY FOUR have to be answered.
4) Answer to both sections B and C should be written in same answer book.
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SECTION – B

Answer ANY TWO out of FOUR questions (10 x 2= 20)

1. Explain in detail different types of digital radiography.
2. Discuss differences between conventional radiography, CR and DR system.
3. What is PACS? Write advantages and disadvantages of PACS.
4. What is DICOM? Write in detail about its uses.

SECTION – C

Answer ANY FOUR out of SIX questions (5 x 4= 20)

1. Thin film transistor.
 2. Direct flat panel detectors.
 3. Control panel of radiographic equipment.
 4. CR Cassette
 5. Indirect flat panel detectors.
 6. Enumerate advantages of 3-phase generation of X-rays.
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Section- C- Short Answer Question 20 Marks
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 - 4) Answer Section A in the sheet provided and submit the sheet after answering.
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SECTION – A

Multiple Choice questions have been provided. Tick the single best answer. (10 x 2 =20)

1. What is the most recent development in digital radiography image receptors?
 - A. photostimulable phosphors
 - B. direct capture solid-state devices
 - C. fanned x-ray beams
 - D. linear array radiation detectors
2. Which is the most common photoconductor used in Direct Digital Radiography?
 - A. Gadolinium oxysulphide
 - B. Cesium iodide
 - C. Barium fluorohalide
 - D. Selenium
3. A radiologist wants to improve the spatial resolution of the anatomy being examined. The change most likely to lead to this is?
 - A. decreased collimation
 - B. increased field of view, same matrix size
 - C. increased matrix size, same field of view
 - D. selection of a smoothing algorithm
4. CCD means:
 - A. Charged Couple Device
 - B. Continuous Charged Detector
 - C. Conventional charged Device
 - D. Conventional charged detectors

PTO

5. PACS stands for:
- A. Pocket Adopter Compute System
 - B. Picture Archiving and Computer System
 - C. Picture Archiving and Communication System
 - D. Printing and Copying System
6. Smallest complete sample of an image is
- A. Detector
 - B. Pixel
 - C. Bit
 - D. Byte
7. In Digital Radiography, Spatial resolution is determined by:
- A. Pixel size
 - B. Matrix size
 - C. Type of detector
 - D. mAS
8. What is full form of DICOM?
- A. Digital Information and Communications in Medicine
 - B. Digital Imaging and Cooperation in Medicine
 - C. Digital Imaging and Communications in Medicine
 - D. Digital Informatics and Communications in Medicine
9. What is the current phosphor of choice for input phosphor in fluoroscopy?
- A. Europium Halide
 - B. Zinc- cadmium sulphide
 - C. Cesium Iodide
 - D. Gadolinium oxysulfide
10. Where in an x-ray image intensifier are x-rays are converted into light?
- A. Photocathode
 - B. Anode
 - C. input phosphor
 - D. Output phosphor

Total Marks Obtained: _____

Signature of Invigilator:

Signature of Examiner:
