

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

Day : Tuesday

Time : 10:00 AM-12:00 PM

Date : 31-01-2023

W-22535-2022

Max. Marks : 20

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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 – A**

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

1. VRT stands for:
  - A. Volume- Reconstruction Technique
  - B. Volume- Rendered Technique
  - C. Voxel-Rendered Technique
  - D. Voxel- Reconstruction Technique
2. Negative oral contrast for CT abdomen study contains:
  - A. Diatrizoate
  - B. Iomeprol
  - C. Gadolinium
  - D. Mannitol
3. For CECT study, which blood investigation is to be checked before injecting contrast?
  - A. Hemoglobin level
  - B. Creatinine level
  - C. Uric acid level
  - D. Complete Blood Count
4. For CT head study, patient is positioned:
  - A. Feet first, supine
  - B. Head first, prone
  - C. Head first, supine
  - D. Feet first, prone
5. The preferred size of the IV Cannula for injecting contrast for CECT Angiography study is
  - A. 18 G
  - B. 20 G
  - C. 22 G
  - D. 24 G

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6. What is the ideal concentration of Iodine within the contrast that can be used for CT Angiography study?
  - A. 200-250
  - B. 350-400
  - C. 300-350
  - D. 150-200
7. Collimation directly reduces:
  - A. Resolution
  - B. Dose
  - C. Dose area product
  - D. Tube voltage
8. Smallest complete sample of an image is
  - A. Byte
  - B. Detector
  - C. Pixel
  - D. Bit
9. What is the ideal rate of contrast injection for CT Angiography study?
  - A. 1-2 ml/sec
  - B. 2-3 ml/sec
  - C. 4-5 ml/sec
  - D. 5-6 ml/sec
10. For HRCT Thorax study, Scan is acquired in:
  - A. Suspended expiration
  - B. Suspended inspiration
  - C. During continued respiration
  - D. Any of the above

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

**Signature of Invigilator:**

**Signature of Examiner:**

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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. Write in detail about cleaning and disinfecting the CT equipment.
2. How do you perform CECT Abdomen study? Write about patient preparation, patient position, indications, contraindications and scan technique.
3. Describe different CT artefacts?
4. Describe different generations of CT?

**SECTION – C**

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

1. How do you perform CT Cisternography study? Write about patient preparation, patient position, and scan technique.
  2. Write in short about Multiplanar Reformation.
  3. Write in short about window width and window level.
  4. Write in short about metal and bone artifact.
  5. Write in short about Maximum Intensity Projection.
  6. Write in short about slip ring technology.
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