

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

B.Sc. (R&IM) Sem-V : WINTER :- 2021  
SUBJECT: ADVANCED CT IMAGING

Day : Friday  
Date 4/2/2022

W-22535-2021

Time : 10:00 AM-12:00 PM  
Max. Marks: 20

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 in **SEPARATE** sheet and has to be answered on same sheet. This sheet should be completed with the first **20** minutes of starting of the examination. This sheet with Section A only will be collected by Supervisor.
- 3) Section B has four long questions and **ANY TWO** questions have to be answered.
- 4) Section C has six short questions and **ANY FOUR** questions have to be answered.
- 5) You have to make  $\surd$  such kind of mark in the box of the appropriate answers.

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

SECTION - A

M.C.Q.'s

- 1) VRT stands for : (20)
  - a)  Volume – Reconstruction technique
  - b)  Volume – Rendered technique
  - c)  Voxel – Rendered technique
  - d)  Voxel – reconstruction technique
- 2) MPR stands for : (20)
  - a)  Maximum Planar Reformation
  - b)  Multi Planar reformation
  - c)  Minimum Planar Reformation
  - d)  Multi Part Reformation
- 3) 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
- 4) Before CECT study, how long should a patient be kept fasting?
  - a)  1-2 hrs
  - b)  2-3 hrs
  - c)  3-6 hrs
  - d)  10-12 hrs

P.T.O.

- 5) For CT neck study, patient is positioned:
- a)  Feet First, supine
  - b)  Head first, prone
  - c)  Head First, supine
  - d)  Feet first, prone
- 6) For HRCT Thorax study, Scan is acquired in:
- a)  Suspended expiration
  - b)  Suspended inspiration
  - c)  During continued respiration
  - d)  Any of the above
- 7) For Angiography study filming, images should be given:
- a)  In MInP and with decreased thickness
  - b)  In MInP and with increased thickness
  - c)  In MIP and with increased thickness
  - d)  In MIP and with decreased thickness
- 8) Collimation directly reduces:
- a)  Resolution
  - b)  Dose
  - c)  Dose area product
  - d)  Tube voltage
- 9) Negative oral contrast for CT abdomen study contains:
- a)  Diatrizoate
  - b)  Iomeprol
  - c)  Gadolinium
  - d)  Mannitol
- 10) The preferred technique used for contrast injection in angiography is?
- a)  Timed injection
  - b)  Non – Timed injection
  - c)  Bolus – tracking method
  - d)  None

Total marks obtained: \_\_\_\_\_

Signature of Invigilator: \_\_\_\_\_

Signature of Examiner: \_\_\_\_\_

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SUBJECT: ADVANCED CT IMAGING**

**Day : Friday  
Date 4/2/2022**

**W-22535-2021**

**Time : 10:00 AM-12:00 PM  
Max. Marks: 40**

**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 B has four long questions and **ANY TWO** questions have to be answered.
- 3) Section C has six short questions and **ANY FOUR** questions have to be answered.
- 4) Answer to both the section should be written in **SAME** answer book.

**SECTION - B**

**Long answer ( Attempt ANY TWO) (20)**

- 1) How do you perform CT Brain Angiography study? Write about patient preparation, patient position, and indications contraindications of scan.
- 2) Describe different generations of CT.
- 3) How do you performance CT Pulmonary Angiography study? Write about patient preparation, patient position, and indications contraindications of scan.
- 4) How do you perform CECT Neck study? Write about patient preparation, patient position and scan technique.

**SECTION - C**

**Short answer ( Attempt ANY FOUR) (20)**

- 1) How do you perform CT KUB study?
- 2) Write in short metal and bone artifact.
- 3) CT Number
- 4) CT contrast media
- 5) Write in short about humidity requirement of CT equipment.
- 6) Write in detail about preventive maintenance routine for CT equipment.

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