

C.U.SHAH UNIVERSITY

Summer Examination-2018

Subject Name : Instrumentation in Radiology

Subject Code : 2SC02INR1

Branch: PGDMIRT

Semester : 2

Date : 23/04/2018

Time : 10:30 To 01:30

Marks : 70

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
 - (2) Instructions written on main answer book are strictly to be obeyed.
 - (3) Draw neat diagrams and figures (if necessary) at right places.
 - (4) Assume suitable data if needed.
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Q.1 Fill in the blanks: (14)

1. The typical ct image s composed of ____ row, each of ____ piexel.
2. HU of AIR____ and Compact bone ____
3. First generation type CT scanner Have ____like x- ray beam.
4. ____ technology made helical acquisition possible.
5. MRI is an ____ modality.
6. In MRI TR is____
7. B0 is calculated from the ____
8. echocardiography can help detect the presence and assess the severity of____
9. ____ is a dedicated radiographic technique for imaging the Brest.
10. length of ____ within one 1 cm in size on CC
11. ____ are not normally seen in an x-ray image, because of low tissue contrast.
12. The first contrast media used for intravascular injection were called ____.
13. Approx. ____ ml diluted contrast / injection given in DSA for each projection.
14. During angiography, patients may be sedated to reduce _____

Attempt any four questions from Q-2 to Q-8

Q.2 Attempt all Questions: (14)

1. Write a note on CT Scan
2. Write a note on CT Scanner evolution.

Q.3 Attempt all Questions: (4+4+6) (14)

1. Define different type of Artifact in CT Scan
2. Write Different types of CT Scan Examinations.
3. Describe Accute and delayed contrast reaction of iodinated contrast.



Q.4 Attempt all Questions: (14)

1. Write a note on MRI
2. Explain advantages and Disadvantages of MRI

Q.5 Attempt all Questions: (14)

1. Write a note on B_0 and Magnetism.
2. Describe Larmore frequency.

Q.6 Attempt all Questions: (14)

1. Describe T1 and T2 weighted sequence
2. What are Advantages and disadvantages of Ultrasound?

Q.7 Attempt all Questions: (14)

1. Describe Ultrasound transducer with Diagram
2. Write a note on Colour dopper

Q.8 Attempt all Questions: (14)

1. What is Echo cardiography ?
2. What is mammography and its Criteria ?

