READING HOSPITAL SCHOOL OF HEALTH SCIENCES
MEDICAL IMAGING PROGRAM
CROSS SECTIONAL ANATOMY--- 2022

*Complete and submit this study guide to Taryn via e-mail **by 9/7/22***

***Please click on the box next to each question to insert your answer.*

Introduction to CSA Review

1. When slice thickness is adjusted what effect does the adjustment have on included detail of the exam?

2. Describe how MRI is used in producing diagnostic images. How is the image created?

3. What other terms might be used in regard to axial images?

4. In a T2 weighted image, how will the following tissues appear?
   Fat:
   Water:

5. What is the significance of Hounsfield Units in relation to the field of CAT scan?

6. When was the first MRI scan published?

7. What year was the first CT scan performed and what was the scan that was performed?

8. List the Hounsfield units for the following tissue types:
   Water:
   Bone:
   Air:

9. List two advantages of cross-sectional anatomy as compared to conventional x-ray images.

10. From the technologist perspective in viewing cross sectional anatomy images your right corresponds with the patients __ ___ and your left corresponds with the patients _____

11. What is the purpose of a “scout” or “scanogram”

12. Comparing MRI with CT, which modality has a “safer” contrast that is administered to the patient that is easier for the patient to process within their body and eliminate easily from the body? Explain why it is considered to be “safer”

13. What plane is imaged when going from inferior to superior?

14. List two things that can be used to properly identify anatomy for any given axial image.

15. What imaging plane are images considered to be in when imaged from posterior to anterior?

16. Which modality, CT or MRI focuses on smaller areas of scanning versus larger scanning areas?

17. What are different advantages between CT and MRI that separates one from the other?

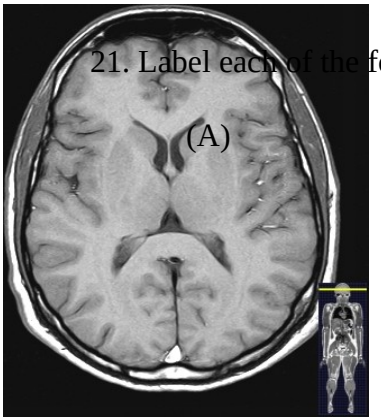
18. What imaging plane are images considered to be in when imaged from left to right?

19. In a T1 weighted image, how will the following tissues appear?
    Fat:
    Water:

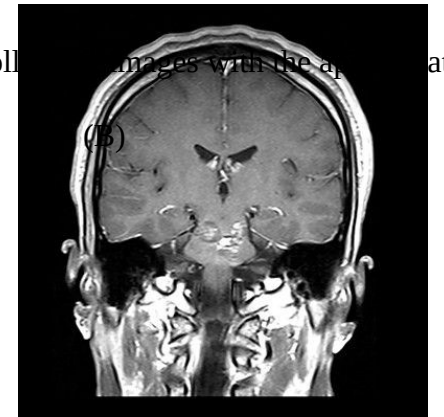
20. How much of the patient’s body can be seen on a sectional image and how is this adjusted?

21. Label each of the following images with the appropriate imaging plane.

(A)



(B)



(C)