

Name: _____

Date: _____

Study Guide Final Exam DA 104 SP 22

If you complete and submit your study guide you will receive 5 bonus points on your final exam. The study guide WILL NOT be graded or returned. You must submit your study guide in the link provided in D2L by MAY 12, 2022

1. Define:
 - a. Radiograph
 - b. Radiation
 - c. Ionization
 - d. Photons
 - e. Quality
 - f. Quantity
 - g. Wavelength
 - h. Total dose
 - i. Dose rate
 - j. ALARA
 - k. Density
 - l. Pathogens
 - m. Asepsis

n. interpret

2. What are the advantages of dental imaging?
3. What is the purpose of the metal housing that surrounds and protects the x-ray tube?
4. What is the purpose of the anode and cathode?
5. What is the purpose of the lead collimator?
6. Discuss in detail:
 - a. Kilovoltage (kV)
 - b. Milliamperage (mA)

c. Time

7. How does ionizing radiation affect living tissues?
8. Explain the indirect theory of radiation.
9. Explain the direct theory of radiation.
10. What are Stochastic biologic effects, **LIST EXAMPLES?**
11. What are Nonstochastic biologic effects, **LIST EXAMPLES?**
12. What are the symptoms of long-term effects of radiation?
13. What are the symptoms of short-term effects of radiation?

14. Discuss ways we protect our patients **before** taking radiographs and **after** taking radiographs.
15. Discuss the guidelines for prescribing dental radiographs.
16. What is inherent filtration?
17. Discuss the shape(s), purpose, and location of the collimator?
18. Discuss the purpose of the lead apron, the types of lead aprons, and when to use the lead apron?
19. Compare state and federal regulations for dental x-ray equipment.

20. What does PID stand for and what is its purpose.

21. What is the purpose of the receptor holder?

22. List the different sizes of film or sensors used to take radiographs and explain what type of x-ray you are performing and what type of patient (adult, child)

23. How do you minimize dimensional distortion?

24. List images that will appear radiopaque on an x-ray.

25. List images that will appear radiolucent on an x-ray.

26. Discuss the importance of dental images.

27. What is detectable on dental images?

28. Discuss the importance of informed consent and who can give informed consent.

29. List the steps to prepare the treatment room before taking dental radiographs.

30. What type of x-ray do we use to evaluate interproximal caries?

31. Explain how to take an x-ray using the occlusal technique. Discuss the different types of occlusal projections and what is being examined.

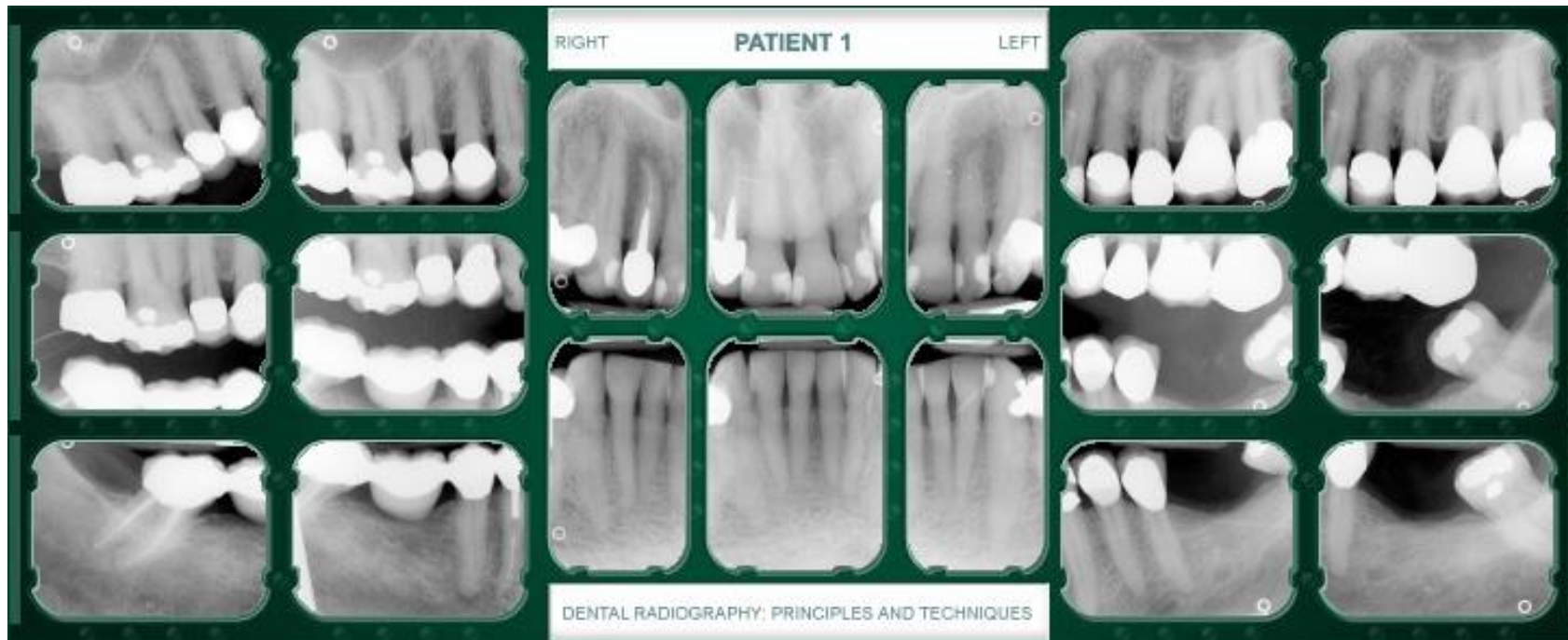
32. Explain what a Panoramic image is. What are the disadvantages and advantages?

33. Explain what can cause patients to have a gag reflex.

34. List the advantages and disadvantages of the dental sensor.

Patient 1

Mr. McGuire is a 72-year-old retired mailman. He visited the dentist nearly one year ago, and currently, he is concerned about the appearance of his teeth. His most recent radiologic examination consisted of four bite-wing images taken about 3 years ago. His chief complaints include food catching between his back teeth and overall sensitivity to hot and cold. He experiences slight gingival bleeding with brushing. His probe depths average 4 to 6 mm in the posterior quadrants.



1. Identify the technique error(s) seen on the mandibular right premolar projection.
 - a. cone-cut
 - b. packet placement
 - c. horizontal angulation error
 - d. both a and b
2. Identify the radiopacities seen interproximally on teeth Nos. 8 and 9.
 - a. advanced interproximal caries
 - b. composite restorations
 - c. amalgam restorations
 - d. porcelain crowns
3. When trying to place the maxillary right molar radiograph, the patient begins to gag. The least desirable method to alleviate the gag reflex is
 - a. Give the patient some cool water to drink.
 - b. Instruct the patient to concentrate on something else in the room.
 - c. Instruct the patient to breathe through their nose.
 - d. Discuss in detail the gag reflex and its causes.
4. Identify a clinical finding that may correspond with the bone loss seen radiographically on tooth No. 3.
 - a. recession
 - b. gingival inflammation
 - c. bleeding
 - d. all of the above
5. The slight radiolucency seen near the apex of tooth No. 7 is
 - a. periapical abscess
 - b. canine fossa
 - c. sclerotic bone
 - d. shadow of the nose
6. Identify the periodontal classification of this patient.
 - a. Type I
 - b. Type II
 - c. Type III
 - d. Type IV
7. Rather than a full-mouth series, a new set of four bite-wing radiographs would have been sufficient for the examination of Mr. McGuire today.
 - a. true
 - b. false

8. Identify the restorative material seen on tooth No. 2.
 - a. amalgam
 - b. porcelain-fused-to-metal crown
 - c. gold crown
 - d. gold bridge

9. The pulp chambers and canals of the mandibular anterior teeth appear to be thin, reduced in size, and difficult to view radiographically. One reason to explain this finding is
 - a. The mandibular anterior teeth demonstrate interproximal caries.
 - b. The patient is an older adult.
 - c. These teeth have been traumatized from bone loss.
 - d. The root areas are affected by hypercementosis.

10. Identify the round radiolucency seen inferior to the apices of teeth Nos. 20 and 21:
 - a. mental foramen
 - b. lingual foramen
 - c. incisive foramen
 - d. periapical granuloma