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Mid-Term Examination - D573 *Periodontal Therapy and Treatment Planning I*, fall, 2004

Instructions: Select the single best answer for each question and enter response onto the computer bubble sheet, onto which you also enter your name and social security number. You must turn in both this examination copy and your computer answer sheet. You have 60 minutes to complete the examination.

1. Periodontal instrument sharpness is evaluated:

   A. at the angular junction of the lateral surface of the instrument blade and the instrument shank.
   B. at the angular junction of the lateral surface of the instrument blade and the back surface of the instrument.
   →C. along the cutting edge.
   D. none of the above

2. An acceptable tactile method of assessing periodontal scaler/curette sharpness:

   A. involves feeling for a rounded edge with a gloved finger.
   →B. uses a plastic stick.
   C. requires magnification.
   D. involves bracing an upper arm against a desktop or upper body.

3. The last part of the blade to be sharpened on a periodontal scaler/curette is the:

   A. 1/3rd in the heal area
   B. 1/3rd in the shank area
   C. 1/3rd in the middle area
   →D. 1/3rd in the toe area

4. To minimize the formation of wire edges, the final stroke with a sharpening stone on the lateral surface of a periodontal scaler/curette is directed:

   →A. towards the face of the blade.
   B. parallel to the instrument shank.
   C. laterally along the cutting edge.
   D. away from the face of the blade.

5. Which of the following instrument sharpening approach does <u>not</u> involve use of a lubricant:

   A. ceramic stone
   B. Arkansas stone
   C. India stone
   →D. Nievert whittler

6. The rounded edge on a Nievert whittler is used to:

   →A. remove wire edges after sharpening.
   B. remove wire edges prior to sharpening.
   C. evaluate the sharpness of cutting edges.
   D. sharpen.

7. With a fine grid barrel-shaped stone on a slow-speed handpiece, instrument sharpening is performed:

A. by preferentially reducing the face of the periodontal scaler/curette.
B. by creating a 90 degree angle between the side and face of the periodontal scaler/curette.
→C. by grinding on the lateral surface of the periodontal scaler/curette.
D. by re-shaping the back surface of the periodontal scaler/curette.

8. You look at your periodontal instrument under a magnifying lens and a bright light, and note a white line is noted along the length of the angular junction between the instrument face and its lateral surface. This indicates that:

A. it can be used as is for efficient scaling.
→B. the instrument needs sharpening.
C. too much sludge has built up.
D. an acute angle exists along the length of the cutting edge.

9. Advantages of sharp periodontal instruments include:

→A. Reduced number of treatment strokes needed to scale tooth surfaces.
B. less sludge build up during root instrumentation.
C. Less eye fatigue for the treating clinician in visualizing subgingival calculus.
D. all of the above.

10. You are right-handed and are holding a sickle scaler in your non-dominant hand with the face of the blade directed towards the ceiling. In your other hand you are holding a fine natural Arkansas stone. How should the stone be positioned in order to effectively sharpen the sickle scaler?

A. Parallel to the face of the instrument aimed at a 3 o'clock direction.
B. At an 10 o'clock position along the lateral surface of the instrument.
→C. At a 1 o'clock direction against the side of the instrument.
D. none of the above.

11. To properly sharpen a periodontal scaler/curette, the objective is to:

A. restore a more rounded angle between the face of the instrument and its lateral surface by removing metal from the lateral surface without altering the original shape of the instrument.
→B. create a sharp acute angle on the cutting edge without altering the original shape of the instrument.
C. create a sharp acute angle on the cutting edge by altering the original shape of the instrument.
D. create a more rounded angle on the cutting edge by altering the original shape of the instrument.

12. An occlusal guard:

A. is preferably made for the mandibular arch.
B. should be made of a soft acrylic.
→C. is to be worn every night.
D. should have posterior contacts hitting during protrusive jaw movements.

13. Occlusal adjustment is most effective when:

→A. an increased periodontal ligament width is associated with increased tooth mobility.
B. an increased periodontal ligament width is associated with a non-mobile tooth.
C. an increased periodontal ligament cellularization is associated with grade 3 tooth mobility.
D. the periodontal ligament width is normal on a tooth with a mobile tooth having 75% bone loss.

14. You use articulating ribbon to mark the occlusal contacts on a periodontally healthy patient, and an occlusal prematurity is identified. What is done to the occlusal prematurity if the tooth exhibits increased mobility and an increased periodontal ligament width?

A. No treatment
→B. Removal by selective grinding of the premature contact and slide leading into centric occlusion.
C. Removal by selective grinding of both the premature contact and the centric occlusal contact.
D. Periodontal scaling and instruction of the patient in home oral hygiene procedures.

15. At a specific periodontal site, a 1 mm probing depth is found with a 4 mm wide zone of attached gingiva. What is the width of keratinized gingiva at the periodontal site?

A. 3 mm
B. 4 mm
→C. 5 mm
D. cannot be determined from the data provided

16. Fremitus refers to which of the following?

A. Class 2 or 3 tooth mobility
→B. functional mobility
C. passage of a Nabors probe more than 50% of the buccal-lingual furcation area distance.
D. palpable movement only of a tooth when subjected to protrusive occlusal forces

17. When scoring a tooth for mobility, you note that the tooth has slightly less than 1.0 mm of movement in a horizontal direction. What tooth mobility score would be most appropriate for the tooth?

A. Class 0
→B. Class 1
C. Class 2
D. Class 3

18. When scoring the Plaque Index on a periodontal site:

A. a disclosing solution is used.
→B. a periodontal probe or explorer is used in addition to visual inspection.
C. dental plaque deposits on teeth are only visually evaluated
D. the tooth surface area covered by supragingival calculus is scored in millimeters along with dental plaque thickness

19. A four millimeter distance is measured from the CEJ of a tooth to the apical extent of penetration with light pressure of a periodontal probe into the gingival sulcus. What is the severity of clinical periodontal attachment loss on the periodontal site?

A. slight
→B. moderate
C. severe
D. cannot determine from the data provided

20. A five millimeter distance is measured from the free gingival margin of a tooth to the apical extent of penetration with light pressure of a periodontal probe into the gingival sulcus. What conclusions can be made about the periodontal site.

A. Moderate periodontitis is present.
B. The probing depth is deep in size.
→C. A moderate probing depth is present.
D. Severe clinical periodontal attachment loss is present.

21. In longitudinal evaluations of periodontitis patients experiencing progressive breakdown, periodontal attachment loss occurs:

A. in the form of increasing probing depths alone nearly all of the time.
B. with both gingival recession and increased probing depths nearly all of the time.
C. with additional recession occurring nearly all of the time.
→D. none of the above

22. Periodontal probing of mid-proximal sites of molar teeth:

→A. should be performed where the probe is angulated interproximally so that the probe tip is directed
at the most mid-proximal location under the tooth contact.
B. should be performed where the probe is angulated interproximally so that the probe tip is directed at the most mid-proximal location above the tooth contact.
C. should be performed where the probe is held parallel to the long axis of the tooth even though the probe tip is not directed into the most mid-proximal area.
D. none of the above.

23. Poor patient plaque control is indicated by:

A. a Plaque Index score of 0
B. a Plaque Index score of 1
→C. ≥ 20% dental plaque-positive tooth surfaces in a patient's mouth
D. all of the above

24. Subgingival calculus formation is:

A. influenced by salivary gland secretions.
→B. generally localized to areas where plaque control is poor and gingival inflammation present.
C. usually white in color
D. easily visualized in routine clinical examinations

25. A radiographic furcation arrow represents what clinical entity?

A. The fusion of two tooth roots.
→B. The presence of either a Grade II or III furcation involvement.
C. An incipient furcation involvement.
D. The presence of subgingival calculus in a furcation lesion.

26. The presence of an intact crestal lamina dura at an interproximal septa:

A. is a highly reliable predictor of future clinical periodontal breakdown within a 24-month period after exposure of the radiographs.
B. is unrelated to the risk of subsequent periodontal breakdown in the area.
→C. is highly reliable as a predictor of clinical periodontal stability up to a two year period after exposure of the radiographs.
D. None of the above.

27. When eight millimeters in length is measured between the radiographic CEJ to the most coronal level of intact supporting bone, what is the actual loss of alveolar bone on the site?

→A. 6 to 6.5 millimeters
B. 4.0 to 4.5 mm
C. 7.5 to 8.0 mm
D. cannot be determined from the data provided

28. The ability of dental plaque to cause alveolar bone resorption for only a limited distance up to 2.5 millimeters from its apical or lateral edge on a tooth root surface is known as:

A. suppuration
→B. the "radius of effectiveness" of microbial dental plaque.
C. the specific plaque hypothesis
D. bone swaging

(please turn to the next page and complete the five short answer questions)

Short Answer Questions

Please write your responses directly onto this examination page under the question.

29. How is clinical measurement of periodontal attachment level performed differently than measurement of probing depth?

It is measured from a fixed reference point, such as the CEJ, as compared to the free gingival margin, which can exhibit coronal swelling and/or recession over time as a result of gingival inflammation and/or trauma.

30. List three (3) radiographic features that may be associated with occlusal trauma.

widened periodontal ligament space, vertical bony defects, root resorption (plus other answers)

31. List three (3) clinical signs that may be associated with occlusal trauma.

increasing tooth mobility, wear facets, tooth migration (plus other answers)

32. List three (3) factors that may influence clinical measurements of probing depth.

probe pressure, probe tip diameter, probe markings, gingival inflammation (plus other answers)

33. What anatomical part of the gingiva is altered which enables greater periodontal probe penetration on teeth mobile as a result of occlusal forces alone (i.e., no gingival inflammation or periodontitis present)?

supracrestal connective tissue