Name:

Mid-Term Examination - D-273 Introduction to Periodontology - spring 2008

Instructions: Select the single best answer for each question. Fill in answers and the last 4 digits of your student number on the computer sheet. Both this examination copy and the computer answer sheet must be turned in. You have until 11:30 am to complete the examination. No questions during the examination to supervising proctors will be answered. Each question is worth 2.5 points.

/1. In mature subgingival dental plaque biofilms, gram-positive streptococci and Actinomyces species are:

A. embedded in dental pellicle, which serves as a hydrated gel barrier against host defenses.

B. selectively adsorbed directly onto negatively-charged phosphate groups on hydroxyapatite tooth surfaces. → C. early colonizers.

D. spatially located closer to the soft tissue wall of the gingival sulcus/pocket as compared to gram-negative bacterial species.

2. Which of the following will potentially increase the rate of dental plaque formation in the human oral cavity?

- A. A low sugar diet
- B. Excessive saliva flow
- C. Sleeping
- →D. Low levels of salivary secretory IgA antibodies
- 3. Enhanced attachment of periodontal pathogens, such as *Prevotella intermedia* and *Fusobacterium nucleatum*, to gingival epithelial cells:
 - ->A. occurs when galactosyl residues on gingival epithelial cell surfaces become exposed.
 - B. is unrelated to inflammatory host reactions to poor oral hygiene.
 - C. takes place when neutrophil-derived neuraminidase enzyme levels decrease in gingival crevicular fluid.

D. none of the above

4. Why is the absence of the CD 18 adhesion molecule on neutrophils associated with severe early-onset periodontitis?

A. Because diapediasis is enhanced as a result.

- -> B. Because phagocytosis of opsonin-coated dental plaque bacteria is reduced as a result.
- C. Because production of reactive oxygen species cidal to dental plaque bacteria is impaired as a result.
- PD. Because margination of circulating neutrophils to endothelial cell surfaces is reduced as a result.
- 5. According to the longitudinal clinical study by Rams et al. (2006), high serum levels of IgG antibodies to Porphyromonas gingivalis or Aggregatibacter actinomycetemcomitans:
 - A. had no significant relationship to the occurrence of further periodontal breakdown in periodontitis patients remaining subgingivally infected with the organisms post-treatment.
 - B. were statistically predictive (4.2 odds ratio) for progressing destructive periodontal disease in susceptible persons remaining subgingivally infected with the organisms post-treatment.
 - -> C. appear to exert a protective role to the host in severe periodontitis adult patients.
 - D. none of the above
- 6. Which of the following is correct relative to IgG antibodies against dental plaque bacteria?
 - A. They are comprised of various carbohydrates.
 - B. They are synthesized by host T lymphocytes.

 - D. They mature in the bone marrow and have a lifespan of 7-20 hours.
- 7. Inflammation characterized as a proliferative response with proliferation of fibroblasts and vascular endothelium:

A. is the stage that occurs immediately after hyperemia.

- **7**B. usually has no or minimal associated pain.
- C. is usually of short duration (hours to days)
- D. all of the above

8. According to the course textbook, which of the following prevents the permanent accumulation of large masses of microorganisms on gingival tissue surfaces?

A. The presence of commensal and beneficial bacterial species that possess lower adherence capabilities. \rightarrow B. The high turnover rate of intraoral epithelial cells.

- C. Shear forces created by chewing dietary food stuffs.
- D. all of the above

/9. During the course of examining a patient, you note the presence of a yellow-gray deposit along the toothgingival margin interface of several teeth. Your additionally note that the yellow-gray deposit is easily displaced with a water spray. What are your conclusions about the yellow-gray deposit?

- A. It most likely is marginal dental plaque.
- B. It most likely is immature dental plaque biofilm.
- -> C. It most likely is materia alba.
- D. none of the above

10. latrogenic changes to teeth, such as placement of an overhanging interproximal margin on a dental restoration:

- A. may interfere with exudate flow.
- B. can form a protective shield for growth of periodontal pathogens.
- C. may lead to increased periodontal destruction.
- \rightarrow D. all of the above

 $\sqrt{11}$. Toxic chemicals can increase susceptibility to periodontal diseases by:

- A. erosion of tooth structure.
- B. reducing immune competence.
- C. damaging epithelial barriers
- -> D. B and C only of the above

 \star 2. Diabetes increases susceptibility to periodontal diseases in part by:

- A. damaging epithelial barriers.
- ->>B. reducing immune competence.
- C. increasing the number of neutrophils.
- D. increasing salivary flow.
- 13. Patient smoking:
 - A. has a minor effect on decreasing periodontal destruction.
 - → B. has a major effect on increasing periodontal destruction.
 - C. can kill some types of periodontal pathogens.
 - D. increases immunoglobulin production.
 - 14. Genetics can influence periodontal disease susceptibility by:
 - A. coding for anatomic variations which lead to altered microbial growth.
 - B. influencing immunologic changes which alter disease susceptibility.
 - C. increasing susceptibility to diabetes.
 - \rightarrow D. all of the above
 - 15. According to the course textbook, where are the two most common locations for supragingival calculus to develop in the human oral cavity?
 - A. On buccal surfaces of maxillary molars and lingual surfaces of mandibular anterior teeth.
 - B. On interproximal and facial tooth surfaces.
 - C. On enamel tooth surfaces and porcelain crown surfaces.
 - D. On lingual surfaces of maxillary molars and lingual surfaces of mandibular anterior teeth.
 - 16. According to the course textbook, calculus on human teeth:
 - \rightarrow A. is always covered with a nonmineralized layer of plaque.
 - B. shows a stronger relationship to periodontal disease than dental plaque in younger persons.
 - C. is only found on supragingival tooth surfaces.
 - D. extend past the junctional epithelium at the base of periodontal pockets.

x7. An absence of alveolar bone which extends over the root to the alveolar margin is called:

- A. Pericoronal abscess
- →B. Dehiscence C. Cribiform plate
- D. Fenestration

18. The most common relationship of enamel and cementum at the CEJ is:

- A. a butt joint.
- B. where cementum is apical to the CEJ.
- ->C. where cementum overlaps enamel.
- D. where enamel overlaps cementum.

19. Cellular cementum is most commonly found at the cervical regions of human tooth roots.

- A. True
- →B. False

20. The sensory functions of the periodontal ligament include all except which of the following?

- A. Tactile
- B. Pressure
- C. Pain
- ⇒ D. Cold sensitivity

 $\sqrt{21}$. Which of the following are among the principles fibers of the human periodontal ligament?

- ⇒A. Alveolar crest
- **B.** Junctional
- C. Cemental
- D. all of the above

22. The junctional epithelium attaches to the tooth structure by what means?

- A. Resorption lacunae
- B. Plaque adhesins
- C. Desmosomes
- ⇒ D. Hemidesmosomes

23. Which of the following is not a genetic condition that increases the risk for periodontitis?

- A. Familial and cyclic neutropenia
- B. Hypophosphatasia
- →C. Factitious lesion
- D. Leukocyte adhesion deficiency syndrome

24. Localized Aggressive Periodontitis is classified as localized to the first molar or incisor with proximal attachment loss on at least two permanent teeth, one of which is a first molar.

-≫A. True

B. False

25. Acellular extrinsic fiber cementum is:

A. devoid of all cells other than fibroblasts and neutrophils.

- >>B. found mostly in the cervical third of tooth roots.
- C. produced by cementoblasts alone.
- D. does not have extrinsic Sharpey's fibers.

26. According to the course textbook, human tooth cementum:

- A. is a calcified, vascular mesenchymal tissue.
- B. has Type III collagen comprising 90% of its organic matrix.
- C. is a calcified, vasular non-mesenchymal tissue.
- D. is avascular.
- /27. Sharpey's fibers in the human PDL:

⇒A. insert into both cementum and alveolar bone.

- B. insert only into tooth cementum.
- C. insert only into alveolar bone.
- D. are totally non-calcified.

28. Which of the following causes of non-plaque-induced gingival lesions has a high patient mortality rate?

⇒A. pemphigus vulgaris

- B. lichen planus
- C. drug-induced lichenoid reaction
- D. pemphigoid

/29. Cementicles, when present, are located:

A. free in the PDL or attached to the cribiform plate.

- B. free in the PDL or attached to cementum.
 C. free in the junctional epithelium.
- D. close to the CEJ and into furcations.
- 30. Hereditary gingival fibromatosis:
 - A. clinical appears as rapidly progressive necrosis of gingival tissues in a person with good oral hygiene.
 - B. is a type of lichenoid reaction lesion.
 - C. forms gingival tissues that contain dense collagen bundles with excessive numbers of fibroblasts.

->D. forms firm, dense, resilient, and insensitive fibrous gingival tissue.

Which of the following gingival diseases is/are an example of a gingival disease of fungal origin?

- A. Recurrent oral herpes -viral
- B? Histoplasmosis

B. Histoplasmosis C. Gingival candidiasis -7 C Endide - Specy infact

D. All of the above

32. Necrotizing ulcerative periodontitis is most frequently found:

- A. related to a Vitamin C deficiency.
- B. in persons with an absence of CD18 neutrophil adhesion molecules.
- 今 C. associated with HIV infection
- D. none of the above

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Progression of periodontal disease is related to:

- 1. presence of an increased pathogenic dental plaque microbial challenge
- 2. presence of a decreased pathogenic dental plaque microbial challenge
- 3. presence of host responses able to contain dental plaque biofilm infections
- 4. presence of host responses unable to contain dental plaque biofilm infections
 - A. 1 and 4 only
 - B. 1 and 3 only
 - C. 2 and 4 only
 - D. all of the above

34. Gingival tissue stippling is located on: R

potentially all gingival tissue surfaces in the human oral cavity.

- B. both marginal gingiva and attached gingiva.
- C. only gingival surfaces exhibiting marked tissue inflammation.
- D. attached gingiva only.

35. Melanin gingival tissue pigmentation is:

A. only found in persons of black (African-American) racial identification. B. expressed to some degree in all normal persons, regardless of race.

- C. formed mainly in the stratum granulosum of gingival epithelium.
- D. formed mostly in the lamina propria.

36. The most coronal surface of the col is covered by:

A. cornified epithelial cells possessing densely packed tonofilaments

- B. keratinized stratified squamous epithelium
- C. non-keratinized stratified squamous epithelium
- D. sulcular epithelium

37. The average width of the periodontal ligament around a functional permanent tooth is approximately:

- ∽ A. 0.2 mm
- B. 0.03 mm
- C. 1.0 mm
- D. 1.5 mm

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Free Gingivel Groove Artached Gingival

38. The free gingival groove is:

marginal

- A. located at the junction of the attached gingiva and mucosa in approximately 50% of persons.
 B. histologically between 0.69 to 1.8 mm in depth when present. histologically depth groups for solutions.
- C. non-keratinized on its surface.

D. none of the above

- 39. Non-ulcerated mucosal projections are seen on the keratinized gingival of a patient lingual to the mandibular canines. What is the most likely non-pathogenic entity found in this location?
 - A. free gingival margin

B. mucogingival junction

C. retrocuspid papilla
 D. The col

#0. Dental focal infections are defined as which of the following?

- A. pathology induced at oral sites by microorganisms of non-oral origin.
- B. pathology induced at both oral and non-oral body sites by microorganisms of non-oral origin.
- C. pathology induced at non-oral body sites by microorganisms of oral origin.
- D. pathology induced at both oral and non-oral body sites by microorganisms of oral origin.