1. In a recent article on the clinical performance of porcelain veneers up to twenty years, which of the following is true?
   a. Veneers on the mandible had a higher failure rate than those on the maxilla
   b. Non-vitality had no effect on the failure rate
   c. Main reason for failure is fracture of the porcelain
   d. Smoking has no effect on longevity

Answer: c

2. Microstructural changes in 3Y-TZP (Yttria-stabilized tetragonal zirconia polycrystals) are associated with which two phenomena?
   a. Crack shielding and dissolution
   b. Dissolution and low temperature degradation
   c. Stress-induced transformation and dissolution
   d. Stress-induced transformation and low temperature degradation

Answer: d

3. Which of the following statements most accurately represents the effect of multiple firings on the marginal integrity of veneered lithium disilicate pressed ceramic crowns?
   a. The mean marginal gap decreases with each firing.
   b. The mean marginal gap increases with each firing.
   c. The mean marginal fit change for 5 firings is less than 1 micron.
   d. The mean marginal fit change for 5 firings is more than 100 microns.
   e. There is a significant increase in marginal gap during characterization and glazing.

Answer: c

4. Which of the following factors is the most significant predictor of potential implant complications in immediately loaded maxillary four implant fixed complete dental prosthesis?
   a. Smoking
   b. Presence of opposing dentition
   c. Poor volume
   d. Bruxism
   e. Systemic factors

Answer: b
5. Which of the following best describes the current evidence based prognosis for the survival rates of immediate implants placed in sites exhibiting periapical pathology?
   a. Placement in infected sites is contraindicated.
   b. The prognosis in infected sites is significantly poorer than rates for placement in uninfected sites.
   c. The prognosis in infected sites can be comparable to noninfected sites.
   d. The prognosis in infected sites is actually better than rates for noninfected sites.
   e. The prognosis is poorer for placement in sites with a fistula present.

   **Answer:** c

6. Which of the following statements is true regarding anterior tooth display?
   a. Irrespective of the lip’s length, the ideal display for maxillary incisors is 1-2 mm.
   b. The mandibular incisor display in patients over 60 years old should be approximately equal to the maxillary incisor display in patients under 30 years old.
   c. As age increases, maxillary central incisor display increases as well.
   d. Women, on the average, display three times as much maxillary anterior tooth surface as men.

   **Answer:** b

7. A suggested maintenance and check-up protocol to minimize galling and thread profile deterioration in retaining screws of fixed-detachable implant-supported prostheses includes all of the following except one. Which one is the exception?
   a. Replace all screws every 2-3 years of service, unless severe damage is observed in all of the screws; in that case, change the screws every 6 months.
   b. Retorque retaining screws after the first 6 months of service; after this initial adjustment, retorque annually.
   c. Once a year, rotate the middle screws with the posterior screws.
   d. Evaluate screws under light stereomicroscope and replace any severely damaged screws.

   **Answer:** a

8. All of the following are risk factors except one, based on patient’s history in the CAMBRA philosophy. Which one is the exception?
   a. Low educational level
   b. Evidence of new restorations
   c. Smoking
   d. Frequent snacking

   **Answer:** b
9. When doing a palatogram, which of the following sentences is used to form the contours of the posterior hard palate and soft palate?
   a. Ned won many prizes
   b. Ralph arrived after everyone else
   c. Young men like yellow kayaks
   d. King Gregory is gagging

   Answer: d

10. All of the following are considered as positions of a retracted tongue except one. Which one is the exception?
   a. Apex of tongue curls downward from the mandibular incisors and dorsally along the frenulum, while the radix of the tongue is elevated.
   b. The apex seems to disappear into the body of the tongue and give it a squared appearance.
   c. The apex of the tongue curls upward and dorsally from the mandibular incisors.
   d. The body of the tongue is depressed into the floor of the mouth moving the entire mass dorsally.
   e. The lateral borders of the tongue approximate the posterior occlusal plane.

   Answer: e

11. According to the Griffith theory of brittle materials, microcracks are the origins of ceramic failures because they act as stress:
   a. Concentrators.
   b. Dissipaters.
   c. Transducers.
   d. Limiters.

   Answer: a

12. In a recent retrospective study of 174 partial dentures, what was the survival rate of clasp-retained removable partial dentures after 5 and 10 years, respectively?
   a. 96% and 90%
   b. 85% and 85%
   c. 80% and 73%
   d. 65% and 50%

   Answer: a

13. Which is the most common erosion pattern in GERD?
   a. Palatal surfaces of upper anterior teeth
   b. Palatal aspect of maxillary posterior teeth
   c. Mandibular posterior teeth
   d. Lingual aspect of lower anterior teeth

   Answer: c
14. At what pH does the enamel start to demineralize?
   a. 3.5
   b. 6.1
   c. 2.0
   d. 5.2

Answer: d

15. Satisfaction with masticatory function is significantly associated with:
   a. Age.
   b. Gender.
   c. Posterior occlusal contacts.
   d. Number of identified foods that could be eaten without difficulty.

Answer: d

16. How much more mean occlusal force is required to stimulate the perception of occlusal load when comparing restored dental implants to natural teeth?
   a. Approximately 2 times greater for restored dental implants
   b. Approximately 3 times greater for restored dental implants
   c. Approximately 6 times greater for restored dental implants
   d. Approximately 9 times greater for restored dental implants

Answer: d

17. Which of the following has been demonstrated to be a risk factor for porcelain fracture for implant supported fixed dental prosthesis?
   a. Location in the posterior
   b. Bruxism
   c. Time in service over 5 years
   d. Male gender

Answer: b

18. Which one of the following statements is correct regarding wear of the implant/abutment interface following *in vitro* loading between a one piece zirconia implant abutment and a titanium implant abutment?
   a. Implants with titanium abutments show a greater initial rate of wear and total wear than one piece zirconia abutments
   b. Implants with one piece zirconia abutments show a greater initial rate of wear and total wear than titanium abutments
   c. Implants with titanium and one piece zirconia abutments show no signs of wear
   d. Implants with titanium and one piece zirconia abutments show equal initial rates of wear and total wear

Answer: b

19. What is the possible effect of bacterial exposure on the mechanical properties of commercially pure titanium dental implants?
   a. Reduces the flexural strength and cycles to failure
   b. Has no effect on the mechanical properties
   c. Titanium is bacteria resistant
   d. Improves the flexural strength and cycles to failure

Answer: a

20. What is the average Balkwill angle?
   a. 16 degrees
   b. 26 degrees
   c. 36 degrees
   d. 46 degrees

Answer: b

21. Neil’s Class 2 throat form is observed in approximately what percentage of edentulous patients?
   a. 20
   b. 25
   c. 30
   d. 35

Answer: b

22. The term “Verticentric” was coined by which of the following authors?
   a. George Murrell
   b. Meyer Silverman
   c. Howard S. Payne
   d. Earl Pound
   e. Max Pleasure

Answer: d

23. Who described a method of determining Occlusal Vertical Dimension utilizing the patient’s neuromuscular perception?
   a. Demer
   b. Lytle
   c. Shanahan
   d. Jankelson
   e. Atwood

Answer: b
24. Denture bases created by the injection molding technique show improved physical properties. Which of the following is the exception?
   a. Dimensional stability is improved
   b. Decreased polymerization shrinkage
   c. Diminished changes in vertical dimension
   d. Increased fracture strength

   **Answer:** d


25. The advantage of polyamide denture base materials as compared to PMMA resin is?
   a. Greater flexural strength
   b. Increased flexural modulus
   c. Increased translucency
   d. Increased hardness
   e. Impact strength

   **Answer:** c


26. A metal ceramic crown in the esthetic zone requires a minimal vertical cervical cut-back of approximately ______ mm on the facial metal framework/porcelain facial margin to achieve an adequate esthetic result.
   a. 0
   b. 0.5
   c. 1.0
   d. 1.5
   e. 2.0

   **Answer:** c


27. Regarding crack propagation in porcelain veneers after cyclic thermal fatigue, which of the following statements is true?
   a. Cyclic thermal changes have no significant effect on development of flaws in porcelain veneers.
   b. Cyclic thermal changes have a significant effect on development of flaws in porcelain veneers.
   c. Cyclic thermal changes decrease the development of flaws in porcelain veneers.
   d. None of the above statements are true.

   **Answer:** b


28. The following are risk factors contributing to implant failure with a four implant immediately loaded maxillary prosthesis. Which one is the primary risk factor?
   a. Smoking
   b. Distal cantilever
   c. Male gender
   d. Opposing complete arch implant restoration

   **Answer:** c

29. When considering placement of two adjacent implants for restorations in the esthetic zone, the dentist should anticipate:

a. A deficiency in inter-implant papillary height compared to that of natural teeth.
b. An increase in inter-implant papillary height compared to a natural tooth next to an implant.
c. No difference in the inter-implant papillary height compared to that of natural teeth.
d. No difference in the inter-implant papillary height compared to an adjacent natural tooth and implant.
e. An increase in inter-implant papillary height compared to that of natural teeth.

**Answer:** a


30. Alteration of a patient’s occlusal vertical dimension has been recommended for all of the following except one. Which one is the exception?

a. To produce a more Class III appearance
b. To produce a more Class II appearance
c. To control implant loading direction
d. To reduce tooth length

**Answer:** d


31. Airborne-particle abrasion is one method of surface-conditioning zirconia ceramic restorations for durable resin bonding. Alternate methods of surface conditioning for bonding include all of the following except one. Which one is the exception?

a. Mechanical abrasion with carbide burs
b. Plasma spraying with hexamethyldisiloxane
c. Application of low fusing porcelain
d. Selective infiltration-etching

**Answer:** a


32. Jerbi’s rule of thirds is a technique that relates to:

a. Trimming of bone in immediate denture construction.
b. Trimming of the cast before immediate denture fabrication.
c. Having less room to set denture teeth.
d. Managing patients who have osteoporosis.

**Answer:** b


33. Although some variability is present, a general guideline for halting chemotherapy is an ANC (absolute neutrophil count) of less than ___:

a. 10,000.
b. 5,000.
c. 1,500.
d. 1,000.
34. Implants are defined as “immediately loaded” if they are restored by a functional, fixed interim prosthesis at the time of surgery or within how many hours after surgery?
   a. 24
   b. 48
   c. 72
   d. 96

   **Answer:** b

35. In a recent study using a standardized brushing machine action on extracted teeth; the only significant wear occurred primarily from the _____:
   a. Use of toothpaste.
   b. Use of a hard toothbrush.
   c. Intensity of the toothbrush stroke.
   d. Pattern of the toothbrush stroke.

   **Answer:** a

36. Selection criteria of appropriate radiographs for use in the diagnostic process by the prosthodontist are guidelines that ____:
   a. Help in selecting radiographs to request.
   b. Aid in determining proper time intervals for radiographs.
   c. Help to minimize radiation exposure for the patient.
   d. Produce maximum diagnostic information.
   e. All of the above.

   **Answer:** e

37. Denture adhesive use is considered appropriate for all of the following except one. Which one is the exception?
   a. Adequately made complete dentures do not satisfy the stability expectations of the patient
   b. Adequately made complete dentures do not satisfy the retention expectations of the patient
   c. When supplemental retention is needed for psychological reasons
   d. When supplemental stability is needed for psychological reasons
   e. When supplemental retention is needed for ill-fitting complete dentures

   **Answer:** c
38. Which of the following have been shown to be effective in alleviating pain in patients with TMD?
   a. Occlusal devices
   b. Behavioral therapy
   c. Jaw exercises
   d. Postural training
   e. All of the above

   **Answer:** e

39. Which of the following statements accurately represent the indirect spruing method in the production of fixed prosthodontic metal restorations?
   a. Molten alloy flows directly from the crucible into the pattern area of the heated mold.
   b. A wax runner bar is used to form a component of the indirect sprue former design.
   c. The indirect sprue is intended to house sufficient molten alloy capable of drawing additional alloy from the pattern during the cooling process.
   d. Use of a straight sprue that includes a reservoir ball pattern.

   **Answer:** b

40. All of the following statements are considered basic principles of casting in the fabrication of a fixed prosthesis except one. Which one is the exception?
   a. Position the restoration’s wax pattern in the “heat center” of the investment mold and the sprue’s reservoir system in a “cold zone”.
   b. Attach the sprue former to the thickest part of the restoration’s wax pattern.
   c. A sprue system reservoir must have sufficient molten alloy to accommodate solidification shrinkage as the cast restoration cools.
   d. In general, turbulence of the molten alloy should be minimized, if not totally eliminated.

   **Answer:** a

41. What is the purpose of the benzoyl peroxide in poly(methyl methacrylate) resin systems?
   a. Serves as an inhibitor to prevent undesirable polymerization during storage
   b. Serves as an inhibitor to slow polymerization when the powder and liquid components are mixed
   c. Serves as an initiator responsible for starting the polymerization process
   d. Serves as a stabilizer to assure reasonable shelf life of the material

   **Answer:** c

42. To permit soft tissues of denture-supporting areas to recover and return to normal form, how long prior to impression making should the dentures be removed?
   a. 4 hours
   b. 10-12 hours
   c. 24 hours
   d. 48-72 hours

   **Answer:** d
43. In the House Diagnostic Classification System for palatal throat form, the Class 2 condition is best represented by which of the following statements?
   a. Large and normal in form; relatively immovable resilient band of tissue 5-12 mm posterior to line drawn across the palate at distal edge of tuberosities.
   b. Large and normal in form; relatively immovable resilient band of tissue 5-12 mm anterior to line drawn across the palate at distal edge of tuberosities.
   c. Medium and normal in form; relatively immovable resilient band of tissue 3-5 mm posterior to line drawn across the palate at distal edge of tuberosities.
   d. Abrupt downturn of soft palate 3-5 mm anterior to line drawn across the palate at distal edge of tuberosities.

   **Answer:** c  

44. According to the shortened dental arch (SDA) concept, all of the following statements are true except one. Which one is the **exception**?
   a. SDA patients with all anterior teeth and at least two opposing posterior occlusal units have sufficient adaptive capacity to maintain oral function.
   b. Increased number of missing occlusal units and arch asymmetry are significant predictors for the presence of chewing complaint.
   c. Missing occluding pair of first molars is a key factor for choosing prosthetic restoration in SDA patients.
   d. From a quality of life perspective, patients with shortened dental arch and missing anterior teeth perceive benefits from removable partial dentures only if anterior teeth replacements are included.

   **Answer:** a  

45. All of the following are true regarding the titanium partial removable dental prostheses except one. Which one is the **exception**?
   a. The use of titanium for the production of cast RDP frameworks has gradually increased.
   b. There are no reports of metallic allergy apparently caused by commercially pure titanium dentures.
   c. The laboratory drawbacks still remain, such as the lengthy burn out, inferior castability and machinability, reaction layer formed on the cast surface, difficulty of polishing and high initial cost.
   d. Titanium RDP frameworks have been reported to fail catastrophically.

   **Answer:** d  

46. All of the following statements are true regarding the use of zinc containing denture adhesives except one. Which one is the **exception**?
   a. The most serious consequences of the chronic and excessive use of denture adhesives reported to date are potential neurotoxicity related to the presence of zinc as a component of the adhesive.
   b. The daily recommended allowances for zinc are 8 mg for women and 11 mg for men. Acute overdose can lead to nausea, vomiting, loss of appetite, cramps, diarrhea and headaches.
   c. Improper use of zinc containing denture adhesives may have adverse systemic effects. Therefore, as a precautionary measure, zinc containing denture adhesive should be avoided.
   d. There are many long term studies to investigate the potential effects of adhesive build up on hard or soft oral tissue if the patient fails to remove the adhesives completely.
Answer: d

47. All of the following statements are true regarding the etiology of denture stomatitis except one. Which one is the exception?
   a. Poor denture hygiene
   b. Continual and night time wearing of removable dentures
   c. Metallic denture base
   d. Bacterial and yeast contamination of denture surface

Answer: c

48. Cement extravasation with abutment supported implant restorations is a problem that may be remedied by ___:
   a. Sealed abutment.
   b. Open abutment.
   c. Internal vented abutment.
   d. Titanium abutment.

Answer: c

49. Which of the following ceramics exhibits the least slow crack growth?
   a. Vitreous porcelain
   b. Leucite based porcelain
   c. Leucite based glass ceramic
   d. Lithium disilicate glass ceramic
   e. Glass infiltrated alumina composite

Answer: d

50. In a recent study evaluating the gingival thickness biotypes, a correlation may exist between the thickness of gingiva and _____:
   a. Width of the zone of keratinized gingival tissue of maxillary anterior teeth.
   b. Periodontal sulcus depth.
   c. Degree of gingival stippling.
   d. Morphology of crowns of teeth.

Answer: a
Reference: Egreja AMC et al; Relationship Between the Zone of Keratinized Tissue and the Thickness of Gingival Tissue in the Anterior Maxilla;Int J Perio Rest Dent;2012;32;573-579.

51. Chipping of layering porcelain in zirconia based restorations occurs due to ____:
   a. Rate of heating.
   b. Rate of cooling.
   c. Coefficient of thermal expansion mismatch.
   d. Feldspathic content of veneering porcelain.
Answer: b

52. Which of the following is not factored into the margin location?
   a. Periodontal
   b. Esthetics
   c. Retention
   d. Finishing
   e. Pulpal health

Answer: e

53. What is considered the most critical factor for implant success at both surgical and functional stages?
   a. Bone quality
   b. Implant length
   c. Implant width
   d. Occlusal load on implant
   e. Thread design

Answer: a

54. According to Tjan’s research in 1984, all of the following are characteristics that a typical or average smile has except one. Which one is the exception?
   a. The overall cervicoincisal length of the maxillary anterior teeth is displayed.
   b. Gingiva does not show (except the interproximal gingival).
   c. The incisal curvature of the maxillary anterior teeth parallels the inner curvature of the lower lip.
   d. The six maxillary anterior teeth and the first or second premolars are displayed.
   e. Anterior teeth follow the golden proportion.

Answer: e

55. Which of the following denture cleaning solutions has been implicated to significantly decrease the retentive value of pink Locator attachments?
   a. NaOCl
   b. Listerine
   c. Efferdent
   d. Polident Overnight

Answer: a

56. There are several differences in the accuracy of reversible hydrocolloid impressions made with different types of impression trays. One of them is:
   a. Certain degree of distortion can always be expected regardless of the type of impression tray used.
   b. Hydrocolloid impressions made with non-perforated stock trays tend to be undersized.
   c. Perforated custom impression trays obtain the most accurate reproduction of the palatal vault.
   d. Clinically significant inaccuracies are found in impressions made with non-perforated custom and stock trays but not on perforated ones.
Answer: a

57. All of the following statements are incorrect about tooth preparation for fixed Prosthodontics in relation to gingival tissues except one. Which one is the exception?
   a. Sub-gingival finish lines should be placed 1 mm short of the epithelial attachment because this is the most vulnerable of the supporting structures of the tooth.
   b. Insufficient axial reduction in the cervical third of a tooth may result in poor esthetic results but better gingival health with all porcelain restorations.
   c. The reason why chamfer and beveled shoulder finish lines should be avoided is that they require part of the rotary instrument to be positioned outside the peripheral tooth contours, increasing the potential for gingival trauma.
   d. Gingival retraction cord can be placed before preparing the tooth as long as the preparation process does not take longer than 15-20 minutes.
Answer: a

58. All of the following parameters are important for maxillary implant placement with immediate loading except one. Which one is the exception?
   a. Adequate maxillary residual ridge
   b. Class I skeletal jaw relationship
   c. 4 mm minimal width of ridge in anterior maxilla
   d. Maxilla that did not require preprosthetic surgery
   e. Adequate interocclusal space
Answer: c

59. Which muscle is responsible for mandible flexure?
   a. Lateral Pterygoid
   b. Masseter
   c. Buccinator
   d. Mylohyoid
Answer: a

60. In complete denture patients, the graphic method of recording CR is preferred over the interocclusal check record method if the:
   a. Ridges are excessively flabby.
   b. Patient has uncontrolled abnormal mandibular movements.
   c. Jaws are abnormally related.
   d. Patient has a retracted tongue position.
Answer: c
61. All of the following are reasons to avoid using gypsum-bonded investments when casting metal-ceramic alloys except one. Which one is the exception?
   a. Gypsum is unstable at the high temperatures required
   b. Sulfide contamination of the alloy can occur
   c. With some alloys obtaining adequate expansion might be difficult
   d. Depletion of oxides affecting porcelain ceramic bonding

   **Answer:** d  

62. Dental plaque consists of ____:
   a. 25% bacteria and 75% intracellular matrix consisting of CaPO₄, proteins, and carbohydrates.  
   b. 70% bacteria and 30% intracellular matrix consisting of carbohydrates, proteins, calcium ions and phosphate ions.  
   c. 50% bacteria, 25% intracellular matrix, and 25% gingival crevicular fluid.  
   d. 25% bacteria, 50% calcium and phosphate ions, and 25% gingival crevicular fluid.

   **Answer:** b  

63. The parotid gland secretes mostly _____ fluid which compromises _____ % of total saliva.
   a. Serous, 20%
   b. Serous, 80%
   c. Serous and mucus, 80%
   d. Serous and mucus, 20%
   e. Mucus, 20%

   **Answer:** a  

64. The most common complication associated with conventional fixed dental prostheses is:
   b. Loss of retention.  
   c. Porcelain fracture.  
   d. Caries.

   **Answer:** d  

65. All of the following are advantages of lingualized occlusion except one. Which one is the exception?
   a. Cusp form is more natural in appearance compared to nonanatomic tooth form  
   b. Easier to arrange in reverse articulation  
   c. Good penetration of the food bolus is possible  
   d. Vertical forces are centralized on the mandibular teeth

   **Answer:** b  
66. All of the following are methods for controlling occlusal loads on implants except one. Which one is the exception?
   a. Splinting multiple implants
   b. Narrowed occlusal table
   c. Increased cusp inclination
   d. Forces directed along implant axis

**Answer:** c


67. The average width/length ratio for maxillary central incisor is:
   a. 78%
   b. 72%
   c. 86%
   d. 68%

**Answer:** a


68. The primary muscle involved in mandibular protrusion is:
   a. Infrahyoid
   b. Medial pterygoid
   c. Temporalis
   d. Inferior lateral pterygoid

**Answer:** d

**Reference:** Okeson, Jeffrey P.; Management of Temporomandibular Disorders, 8th Ed; Mosby, Chapter 1, Elsevier, 2012.

69. According to ADA Specification No. 5, a noble metal will:
   a. Have a noble metal content of at least 25%.
   b. Have a minimum of 25% gold.
   c. Have a noble metal content at least 60%.
   d. Have a minimum of at least 40% gold.

**Answer:** a


70. Comparing the survival of implants placed in mature bone with the survival of implants placed in fresh extraction sockets in the same patients, which of the following is correct?
   a. The survival rate of implants placed in fresh extraction sockets is similar to that of implants placed in mature bone irrespective of the location of the implants in the mandible and maxilla
   b. A significantly higher failure rate is seen with immediate implants in the posterior maxilla
   c. Splinted implants in the posterior mandible and maxilla have a significantly higher success rate than un-splinted implants
   d. A significantly higher failure rate is seen with immediately placed implants in patients older than 70 years.

**Answer:** b

71. The three dimensions of color are ____:
   a. Chroma, saturation, brightness.
   b. Hue, chroma, value.
   c. Hue, value, brilliance.
   d. Value, dimension, saturation.

**Answer:** b  

72. One of the anatomic structures that determine the boundaries of the distolingual flange of a mandibular complete denture is the ____:
   a. Ramus of the mandible.
   b. Retromylohyoid curtain.
   c. Palatopharyngeus muscle.
   d. Pterygomandibular raphe.

**Answer:** b  

73. The TiUnite surface texture produced by Nobel Biocare is commonly performed by ____:
   a. Using a solution of hydrochloric acid and sulfuric acid.
   b. Blasting with 250 to 500 mm corundum grit followed by acid etching in a hot solution of hydrochloric acid and sulfuric acid.
   c. Anodically oxidizing the titanium surface in a proprietary electrolytic solution.
   d. Heating titanium particles to a nearly molten state which sprayed at the surface using inert gas plasma.

**Answer:** c  

74. All of the following oral sedatives can be crushed prior to sublingual delivery during conscious sedation except:
   a. Alprazolam.
   b. Diazepam.
   c. Triazolam.
   d. Lorazepam.

**Answer:** a  

75. Use of right hamular notch to left hamular notch measurement plus ____ provides a useful method for determining the width of the 6 maxillary anterior teeth for complete denture patients with medium and large cast sizes.
   a. 5 mm
   b. 20 mm
   c. 10 mm
   d. 15 mm
   e. 0.5 inches

**Answer:** c  
76. Clasp-retained removable partial dentures showed a survival rate of approximately 90% after 10 years of oral service. What was (were) the predominant complication(s) during oral service?
   a. Caries lesions
   b. Loss of abutment teeth
   c. Fracture of clasps
   d. All of the above

Answer: d

77. Which is not an antiflux?
   a. Graphite (C)
   b. Whitening (ZnO2)
   c. Rouge (Fe2O3)
   d. Fluoride (F)

Answer: d

78. A ________ margin is recommended for a complete titanium crown preparation when using both casting and milling methods.
   a. Shoulder
   b. Chamfer
   c. Knife edge
   d. All of the above

Answer: b

79. All of the following arise from the 1st branchial arch except one? Which one of the following is the exception?
   a. Meckel’s cartilage
   b. Muscles of mastication
   c. Trigeminal nerve
   d. Muscles of facial expression
   e. Sphenomandibular ligament

Answer: d

80. Ideal properties of dental luting agents include all of the following accept?
   a. Biocompatible
   b. High compressive strength
   c. Low solubility
   d. Adhesion
   e. Technique sensitive

Answer: e
81. Which is not a determinant of anterior guidance:
   a. Phontetics.
   b. Condylar border movements.
   c. Positional relationships of the maxillary and mandibular posterior teeth.
   d. Esthetics.
   e. Positional relationships of the maxillary and mandibular anterior teeth.

   Answer: c

82. Proper etching for Lithium Disilicate reinforced dental ceramic is ___:
   a. 9% HF for 60 sec.
   b. 4-5% HF for 20 sec.
   c. 9% HF for 2 min.
   d. 4-5% HF for 60 sec.

   Answer: b

83. In a study on axial wall modification and retention of cement retained crowns______:
   a. Abutments with all 4 walls had the highest retention of all groups.
   b. Abutments with 2 opposing walls had significantly higher retention than that of all other groups.
   c. Abutments with one wall had equal retention to abutments with 3 walls.
   d. Abutments with one wall had significantly less retention than abutments with 2 walls.

   Answer: b

84. Increased roughness of dental ceramics _____:
   a. Decreases the perceived Value.
   b. Decreases the perceived Chroma.
   c. Increases the perceived Value.
   d. None of the above.

   Answer: a

85. What element(s) is/are responsible for the ability to heat soften/harden gold alloy?
   a. Zn
   b. Ag
   c. Ru and Mb
   d. Zr
   e. Cu

   Answer: e
86. All of the following statements are correct regarding Silver-Palladium alloys except one. Which one is the exception?
   a. Is less ductile than Palladium-Silver and more difficult to cast
   b. Is considered a substitute for Type III gold
   c. Ideal for porcelain application
   d. Silver is more dominant, could be up to 60-70%

   **Answer:** c

87. According to Wical and Swoope’s method for measuring mandibular ridge resorption on a panoramic radiograph, which of the following will give an estimate of the original alveolar ridge crest height:
   a. The distance between the lower border of the mandible and the upper border of the mental foramen multiplied by three.
   b. The distance between the lower border of the mandible and the upper border of the mental foramen multiplied by two.
   c. The distance between the lower border of the mandible and the lower border of the mental foramen multiplied by three.
   d. The distance between the lower border of the mandible and the lower border of the mental foramen multiplied by two.

   **Answer:** c

88. All of the following are incorrect regarding the vertical determinants of occlusal morphology as affected by lateral translation movement except one. Which one is the exception?
   a. The looser the TM ligament, the greater the movement and the longer the posterior cusps.
   b. The greater the movement, the smaller the angle between laterotrusive and mediotrusive pathways.
   c. The greater the immediate mandibular translation, the shorter the posterior teeth.
   d. The anterior and posterior movement of the rotating condyle determines the cusp height.

   **Answer:** c
   **Reference:** Jeffrey P. Okeson. Management of Temporomandibular Disorders and Occlusion. 5th Ed, Mosby.

89. In the classic study by Crispin et al. regarding the marginal fit of polymethyl methacrylate interim restorations, which statement is correct?
   a. The marginal accuracy by direct formation interim restoration to the tooth preparation was significantly more accurate than the model-based indirect technique.
   b. The marginal accuracy made by the indirect technique was significantly better than the direct technique.
   c. There was no difference in the marginal accuracy between the techniques.
   d. Development of periodontal pockets of greater than 3 mm were associated with direct technique.
   e. Increased plaque and gingival inflammation were associated with the indirect method.

   **Answer:** b

90. Immediate mandibular translation occurs ____:
   a. Before any forward movement of condyle.
   b. During first 5-6 mm movement of condyle.
   c. During first premature occlusal contact after rotation of condyle.
   d. During immediate rotation of condyle.
91. Complete denture patients prefer which of the following when chewing tough foods?
   a. Molar region for chewing
   b. Premolar region for chewing
   c. It makes no difference since chewing tough foods is not possible with complete dentures
   d. Monoplane occlusal scheme

Answer: b
Reference: Zarb-Bolenders, Prosthodontic Treatment for Edentulous Patients, 12th Ed, Mosby, 16.

92. What is the amount of free monomer left in heat activated acrylic dentures after processing?
   a. 0 - 0.5%
   b. 0.6 - 1.0%
   c. 1.1 - 1.5%
   d. 1.6 - 2.0%

Answer: a

93. When the mandible moves from centric occlusion to the right, the path of the mesio-lingual cusp of tooth #15 traces a path on the opposing molar. Which of the following describes the direction of the path?
   a. Diagonally, posteriorly, buccally
   b. Diagonally, posteriorly, lingually
   c. Diagonally, anteriorly, buccally
   d. Directly medially, toward the lingual

Answer: a

94. Which material has the highest contact angle?
   a. Polysulfide rubber
   b. Addition silicone
   c. Hydrocolloid
   d. Polyether

Answer: b

95. Based on the CAMBRA protocol, 0.12% Chlorhexidine gluconate rinse use should be limited to _____:
   a. Seven consecutive days a month.
   b. Three consecutive days a month.
   c. Five consecutive days every other month.
   d. Seven consecutive days every six months.

Answer: a
96. Which of the following represents an **UNCOMMON** complication 10 years post insertion associated with metal-resin and metal-ceramic implant-supported fixed complete prostheses?
   a. Veneering material chipping/fracture
   b. Fabrication of new opposing denture
   c. Loss of access hole filling
   d. Bone loss greater than 2 mm around implant
   e. Patient dissatisfaction

**Answer:** e


97. According to a recent report on shorter implants in clinical practice, what is the cumulative success rate for single implants placed simultaneously with osteotome sinus augmentation in the posterior maxilla?
   a. 98.9%
   b. 94.5%
   c. 90.9%
   d. 84.9%

**Answer:** a


98. Which one of the following statements is **TRUE** regarding the use of engaging abutment in implant borne screw retained 3-unit fixed cantilevered prostheses?
   a. The usage of engaging abutment in 3-unit fixed cantilevered prostheses is contraindicated.
   b. The usage of engaging abutment away from the cantilever showed increased resistance to fracture of the abutment screw.
   c. The usage of engaging abutment next to the cantilever showed increased resistance to fracture of the abutment screw.
   d. The position of the engaging abutment has no effect in the survival of the screw retained 3-unit fixed cantilevered prostheses.

**Answer:** b


99. All of the following are considered acceptable methods of assessing occlusal vertical dimension in edentulous patients except one. Which one is the **exception**?
   a. Tactile sense
   b. Physiologic rest position
   c. Measurement of closing forces
   d. Deglutition
   e. Mandibular border movements

**Answer:** c


100. All of the following are part of Turner’s classification of wear except one. Which one is the **exception**?
   a. Excessive wear with loss of occlusal vertical dimension
   b. Excessive wear without loss of occlusal vertical dimension and with limited space
   c. Excessive wear without loss of occlusal vertical dimension but with space available
   d. Excessive wear with loss of occlusal vertical dimension and with limited space

**Answer:** b
101. One desires an alloy with high ductility. What would you look for in the material?
   a. Low proportional limit
   b. High percent elongation
   c. High resiliency
   d. Low toughness

Answer: b

102. According to a published systematic review on accuracy of fit of fixed screw-retained implant frameworks fabricated by different methods, the following were concluded with one exception. Which of the following is the exception?
   a. Cast Noble metal frameworks provide a predictable fit
   b. Base metal castings do not provide satisfactory level of fit without additionally refined
   c. CAD/CAM is the least consistent and most technique sensitive of these methods
   d. Spark erosion framework bonding to prefabricated abutment cylinders, and CAD/CAM have the potential to provide implant frameworks with an excellent fit.

Answer: d

103. All of the following are guidelines for preparation of teeth for complete coverage crowns except one. Which one is the exception?
   a. Total occlusal convergence (TOC) should ideally range between 10 and 20 degrees.
   b. Minimal occlusocervical/incisocervical dimension of anterior teeth and premolars prepared within the recommended TOC is 3 mm.
   c. Minimal occlusocervical dimension of molars prepared with the recommend TOC should be 2 mm.
   d. Ratio of the occlusocervical/incisocervical dimension of a prepared tooth to the faciolingual dimension should be at least 0.4 or higher for all teeth.

Answer: c

104. What is the most commonly reported complication for implant-supported fixed dental prostheses in edentulous patients?
   a. Screw loosening
   b. Veneer fracture
   c. Framework fracture
   d. Screw fracture

Answer: b
105. All the following statements are correct regarding the use of shorter implants in clinical practice except one. Which one is the exception?
   a. Successful outcomes were coupled with appropriate diagnosis and multidisciplinary care.
   b. Successful outcomes were obtained with appropriate osseous regenerative therapy allowing ideal positioning of implants.
   c. Successful outcomes were obtained by atraumatic placement of the implant utilizing manual torque wrenches to minimize lateral pressure on the osteotomy walls.
   d. Implant success rates of greater than 98% was determined after 73 to 84 months in function for both single crowns placed in various areas of the mouth.

Answer: c

106. Quality of life is:
   a. An objective concept
   b. An individual’s perceived life experience
   c. Based on different multiple individuals’ (external) frame of reference
   d. Based on a consensus definition

Answer: b

107. Which of the following is correct when comparing milled bar retention to telescopic crown retention when used with removable four implant supported mandibular overdentures?
   a. Milled bars demonstrated higher retention.
   b. Milled bars have lower values for plaque and calculus accumulation.
   c. Telescopic crown retention demonstrated significantly less percentage of peri-implantitis.
   d. Prosthodontic maintenance was significantly higher for bar retention.

Answer: a

108. Recent recommendations for patients who have taken an oral bisphosphonate for more than three years with or without any concomitant prednisone or other steroid medication should ____:
   a. Contact the provider to consider discontinuing the bisphosphonate for three months prior to oral surgery if conditions permit.
   b. Advise the patient to discontinue the bisphosphonate for six months prior to oral surgery.
   c. Not perform the oral surgery.
   d. Continue taking the bisphosphonate as directed and continue with the surgery.

Answer: a

109. When comparing the shear bond strengths of highly cross-linked denture teeth bonded to heat-polymerized PMMA using diatorics or bonding agent:
   a. The diatorics showed higher shear bond strength.
   b. The bonding agent showed higher shear bond strength.
   c. The combination of both showed higher shear bond strength.
   d. There is no difference in shear bond strength.
110. Which of the following describes the behavior of prosthetic screw reverse torque values following repeated tightening/loosening cycles for prosthetic abutments to implants?
   a. No significant difference in reverse torque values will be observed in up to 35 tightening/loosening cycles.
   b. Significant reductions in reverse torque values will be observed when more than 10 tightening/loosening cycles are employed.
   c. Thread fractures can be expected when more than 20 tightening/loosening cycles are employed.
   d. Reverse torque values that are clinically unacceptable are routinely produced with 2-4 tightening/loosening cycles.
   e. Slight increase in torque values due to accumulative wear debris.

Answer: b

111. Which of the following patient systemic factors is known to create a significantly greater risk of implant failure compared to the risk of placement in a similar site in an uncompromised patient?
   a. Active smoking habit
   b. Well controlled insulin dependent diabetes
   c. Age over 65
   d. History of treated and well maintained chronic periodontitis

Answer: a

112. All of the following decrease the time required to clinically fit a cast post except one. Which one is the exception?
   a. Investing the post pattern with one ring liner
   b. Using a burn-out temperature of 600°F
   c. Inward expansion of the investment toward the mold space
   d. Decreasing the volume of investment liquid

Answer: d

113. When comparing axial and tilted implants for mandibular full-arch fixed prostheses, photoelastic stress analysis reveals tilted implants reduced the maximum stress in the distal crestal bone of the distal implant by approximately how much?
   a. 0-5%
   b. 15-20%
   c. 45-50%
   d. 70-75%

Answer: b
114. All the following statements are true when comparing smile characteristics of U.S. white, U.S. Asian Indian, and Indian populations except one. Which one is the exception?
   a. The gender of the evaluator affected the perception of smile.
   b. Few differences were noted in the perception smile esthetics.
   c. Ethnicity had a significant effect on the esthetic choices for Buccal Corridor and Smile Arc.
   d. There were no significant differences noted for gingival display, vertical overlap, lateral incisal step, maxillary midline to mid-face, and maxillary to mandibular midline.

**Answer:** a

115. All of the following statements are true regarding feldspathic veneered zirconia crowns fabricated with knife-edge margins except one. Which one is the exception?
   a. Knife-edge margins allow clinical performance similar to that reported with other margin designs
   b. A common indication for knife-edge preparations is for periodontally involved teeth
   c. Knife-edge margins with zirconia crowns allow for less invasive preparations when compare to other margin designs
   d. Knife-edge margins demonstrated significantly greater gingival inflammation

**Answer:** d

116. All of the following statements regarding Obstructive Sleep Apnea (OSA) are true except one. Which one is the exception?
   a. OSA increases risk for in-office sedation using oral or parental benzodiazepines or use of oral opioids for postoperative pain
   b. Central sleep apneas (CSA) are best treated with oral appliance therapy
   c. A neck circumferences of 17 inches or more (males) or 16 inches or greater (females) were at greater risk for OSA
   d. The total number of apneic and hypopneic episodes per hour of sleep is referred to as the Apnea-Hypopnea Index (AHI)

**Answer:** b

117. Which of the following parameters relates to higher failures when restoring posterior teeth with inlays and onlays?
   a. Non-vital teeth showed a significantly higher risk of failure
   b. No greater risk of failure associated with existing parafuction (bruxism)
   c. Survival of restored premolars was not statistically different than molars after 15 years.
   d. Glass-ceramic onlays and inlays efficacy is less than cast gold restorations.

**Answer:** c
118. ______________, also known as freeform fabrication, is a rapid prototyping concept that assembles geometries for dental restorations in a layer-by-layer process.
   a. Autocasting
   b. Digicasting
   c. 3D-casting
   d. Roboscanning
   e. Robocasting

Answer: e  

119. A recent multi-center case-control study on bisphosphonates and osteonecrosis of the jaw (ONJ) showed the greatest risk factor was _____:
   a. Extractions.
   b. Pre-prosthetic surgery.
   c. Surgical endodontic procedures.
   d. Surgical periodontal procedures.
   e. All of the above.

Answer: a  

120. According to a recent report on shorter implants in clinical practice, which procedure should be avoided during the surgical placement of a short implant?
   a. Simultaneous internal sinus lift procedure
   b. Use of manual torque wrench
   c. Conservative instrumentation of the implant site
   d. Use of hand piece for the implant placement

Answer: b  

121. A recent evaluation of small diameter (3.3 mm) implants determined that the significant factor associated with failure was ______________.
   a. Infection/Inflammatory processes.
   b. Type 4 bone placement.
   c. Marginal bone loss.
   d. Loading stress.

Answer: b  

122. During implant/prosthesis loading, which of the following variables demonstrate the greatest amount of torque under load to the components?
   a. Horizontal implant offset
   b. Apical implant offset
   c. Implant inclination
   d. Cuspal inclination of the prosthesis
123. Which of the following muscle responses measured by EMG are associated with canine-guided disclusion of the posterior teeth?
   a. Increased activity all the muscles associated with mandibular elevation.
   b. The medial pterygoid muscle undergoes isotonic muscle contraction.
   c. The EMG activity of the temporal and masseter muscles is decreased.
   d. The anterior temporal muscle shows increased activity during lateral slide from centric occlusion.
   e. There is no significant change on the EMG activity of the temporal and masseter muscles.

Answer: c

124. Which muscle is active in mandibular depression?
   a. Medial pterygoid
   b. Superior pharyngeal constrictor
   c. Palatopharyngeus
   d. Superior belly of the lateral pterygoid
   e. Levator veli palatini

Answer: d
Reference: Okeson, Jeffrey P.; Management of Temporomandibular Disorders, 8th Ed; Chapter 1, Elsevier, 2012.

125. The local anesthetics, Lidocaine and Mepivicaine, belong to which of the following classifications?
   a. Esters
   b. Amides
   c. Proteins
   d. Sulfonamide
   e. Glycosides

Answer: b

126. Which of the following statistical test is most appropriately used to analyze two (unpaired) treatment groups with parametric data?
   a. Mann-Whitney test
   b. Unpaired t-test
   c. Chi-squared analysis
   d. Analysis of variance
   e. Kruskal-Wallis test

Answer: b
127. All of the following statements regarding the support of a maxillary complete denture by the hard palate are correct except one. Which one is the **exception**?
   a. Rugae contribute to the stress-bearing role
   b. Horizontal hard palate is the primary area of support
   c. Submucosa posterolateral to the median palatal suture contains glandular tissue and is non-displaceable
   d. Submucosa anteriolateral to the median palatal suture contains adipose tissue and is displaceable
   e. Submucosa of the medial palatal suture is very close to underlying bone and has to be relieved

**Answer:** c  

128. Which of the following dental impression materials utilizes a ring-opening mechanism to reduce polymerization shrinkage?
   a. Polysulfide
   b. Addition polyvinyl siloxane
   c. Polyether
   d. Irreversible hydrocolloid
   e. Condensation polyvinyl siloxane

**Answer:** c  
**Reference:** Powers, John, and Sakaguchi, Ronald L.; *Craig’s Restorative Dental Materials*, 12th Ed.

129. All of the following statements regarding the design a rotational path RPD are correct except one. Which one is the **exception**?
   a. Increasing the number of minor connectors increases the potential difficulty of rotating the framework into place.
   b. All block outs of interferences must be determined by radii that are extended at right angles from the axis of rotation.
   c. Increased block out is required as the distance of the minor connector from the axis of rotation increases.
   d. The closer the minor connector is to the axis of rotation the greater the curvature of the arc that it must follow.

**Answer:** c  
**Reference:** Krol AJ. *Removable partial denture design: Outline syllabus.* 5th Ed.

130. The most complete list of the structures within the retromolar pad is best described by which of the following?
   a. Pterygomandibular raphe, buccinator, and superior constrictor fibers
   b. Mucous glands, pterygomandibular raphe, buccinator, masseter and superior constrictor fibers.
   c. Mucous glands, temporal tendon, pterygomandibular raphe, buccinator, and superior constrictor fibers.
   d. Temporal tendon, pterygomandibular raphe, buccinator, temporal and superior constrictor fibers.

**Answer:** c  

131. A Siebert’s Class II ridge defect is best described by which of the following?
   a. Faciolingual loss of tissue width with normal ridge height.
   b. Loss of both ridge height and width.
   c. Loss of ridge height with normal ridge width.
   d. Loss of ridge width with normal ridge height.
Answer: c

132. All of the following statements are correct regarding the innervation of the tongue except one. Which one is the exception?
   a. Cranial nerve VII (facial) innervates anterior 2/3 of the tongue for taste
   b. Cranial nerve IX (glossopharyngeal) innervates the posterior 1/3 of the tongue for taste and general sensory
   c. Cranial nerve XII (hypoglossal) innervates most of the intrinsic and all of the extrinsic muscles of the tongue
   d. Cranial nerve V-3 (lingual) innervates anterior 2/3 of the tongue for general sensory
   e. Cranial nerve X (vagus) innervates the palatoglosseous muscle

Answer: c

133. All of the following are structural incompatibilities of the articular surfaces of the TM joints except one. Which one is the exception?
   a. Spontaneous dislocation
   b. Deviation in form
   c. Subluxation
   d. Adhesion
   e. Protective co-contraction

Answer: c

134. Nikolsky’s Sign is a clinical dermatologic test useful in the diagnosis of which of the following entities?
   a. Erythema multiforme
   b. Pemphigus vulgaris
   c. Lupus erythematosus
   d. Systemic sclerosis
   e. Psoriasis

Answer: b

135. A side effect of the NSAID ibuprofen is ____:
   a. Increased bleeding time.
   b. Reduced bleeding time.
   c. Increased platelet function and no effect on bleeding time.
   d. No effect on bleeding time.
   e. Possible pancreas dysfunction.

Answer: a

136. All of the following are features of a retracted tongue except one. Which one is the exception?
   a. The tongue is pulled back and the floor of the mouth is exposed.
   b. The lateral borders are either inside or posterior to the ridge.
   c. The tip of the apex of the tongue sometimes lies in the posterior part of the floor of the mouth or may be withdrawn into the body of the tongue.
   d. Retracted tongue positions occur in about one of every four patients.
   e. Retracted tongue is problematic for both dentate and edentulous patients.
Answer: c

137. Which Aramany classification of partially edentulous maxillectomy patients describes the resection along the midline of the maxilla maintaining the teeth on one side of the arch?
   a. Class I
   b. Class II
   c. Class III
   d. Class IV
   e. Class V

Answer: a

138. When analyzing nominal data, the following statistical method may be used ___:
   a. Simple linear regression.
   b. Correlation - r.
   c. Paired t-test.
   d. Kruskal-Wallis test
   e. Chi-squared test.

Answer: e

139. Metamerism describes:
   a. Pairs of objects with the same hue that appears different under the same light.
   b. Two objects with different value that appears similar under a certain light.
   c. Pairs of objects that have different spectral curves but appear to match when viewed in a given hue.
   d. An object that appears to have the same color under different light conditions.

Answer: c

140. Craniofacial implants used to retain facial prosthesis have the highest survival rates in which of the following sites?
   a. Orbital
   b. Piriform/nasal
   c. Frontal bone
   d. Auricular
   e. Zygoma

Answer: d

141. The following statements are advantages for removable partial dentures using Krol’s RPI concept except one? Which one is the exception?
   a. The mesial rest acts as a point of rotation, exerting a force on the adjacent tooth.
   b. The rest, proximal plate and I-bar prevent migration of abutment.
   c. Physiologic relief is required for the proximal plate when pressure is exerted on the denture base.
   d. The I-bar moves in a mesiobuccal direction under a masticatory load.
Answer: a  

142. Moderate sleep apnea is defined by an Apnea-Hypopnea Index (AHI) between the following values ____.
   a. 0 – 5.
   b. 6 – 14.
   c. 15 – 30.
   d. 31 – 44.
   e. 45+.

Answer: c  

143. Which of the following is the most common complication encountered with the distraction osteogenesis procedure?
   a. Infection
   b. Paresthesia
   c. Compromised esthetics
   d. Need for additional soft tissue grafting
   e. Alveolar bone loss

Answer: d  

144. Which of the following is an initiator in light-activated resin restorative materials?
   a. Glycol Dimethacrylate.
   b. Hydroquinone.
   c. Benzoyl Peroxide.
   d. Camphorquinone.
   e. Dimethyl-p-toluidine.

Answer: c  

145. Each of the following statements regarding basic obturator design and classification for the partially edentulous patient is correct EXCEPT one. Which one is the exception?
   a. When treatment planning with the surgeon, the prosthodontist should make recommendations directed toward converting a potential Aramany Class II defect into an Aramany Class I defect.
   b. In Aramany Class III cases the defect is located in the central portion of the hard palate and the design is based on quadrilateral configurations.
   c. Aramany’s Classification System is divided into six different groups based upon the relationship of the defect area to the remaining abutment teeth with class sequence being a reflection of frequency of occurrence.
   d. In Aramany Class IV cases the defect includes the pre-maxilla on the nonsurgerized side and the design is linear.

Answer: a  
146. Each of the following statements regarding gold-palladium (Au-Pd) alloys is correct EXCEPT one. Which one is the exception?
   a. The Au-Pd alloys exhibit a “white gold” color and have been commercially successful.
   b. Due to the Au-Pd alloys’ low silver content, porcelain does not discolor, castability is improved and the coefficient of thermal expansion is increased.
   c. The only significant disadvantage of the Au-Pd alloys is their poor sag resistance.
   d. The Au-Pd alloys were developed in an attempt to overcome the two major problems associated with silver-containing alloys: porcelain discoloration and a high coefficient of thermal expansion.

Answer: c

147. The Weibull Modulus is:
   a. A measure of the material elasticity.
   b. A measure of failure for ceramics.
   c. Smaller for homogeneous materials.
   d. A measure of the flaw distribution.

Answer: d

148. Xerostomia may be produced by prolonged use of antihistamines resulting from the following cause.
   a. Direct depression of salivary gland cells.
   b. Anticholinergic action.
   c. Inhibition of histamine-induced salivation.
   d. Cholingeric action.

Answer: b

149. Which is the most important factor for achieving retention of a maxillary complete denture?
   a. Undercuts
   b. Cohesion
   c. Peripheral Seal
   d. Atmospheric Pressure
   e. Adhesion.

Answer: c

150. Which mineral constituent of modern dental porcelains is responsible for increasing the coefficient of thermal expansion?
   a. Tridymite
   b. Amorphous “glassy” phase
   c. Quartz
   d. Kemite
   e. Leucite

Answer: c