



VINAYAKA MISSION'S RESEARCH FOUNDATION, SALEM
(Deemed to be University under section 3 of the UGC Act 1956)

Ph.D Entrance Test – November – 2025

Faculty of Dentistry / Prosthodontics and Crown & Bridge

Instructions / Note:

1. Answer all the questions. Each question carries one mark.
2. No negative marks for wrong answers.
3. Read each question carefully and answer in the OMR sheet provided for each question with only blue/ black pen to fill the circles in the OMR Sheet.
4. Question number 1 - 35 questions belong to Research Methodology component and Question number 36-70 questions belong to the subject at PG level
5. Return the question paper along with the OMR sheet.

36. Bennet angle is formed between sagittal plane and the average path of the advancing condyle as viewed in horizontal plane during _____
 - A. Medial movement
 - B. Lateral movement
 - C. Centric freedom
 - D. Intercuspal movement
37. Freedom of centric relation correlates with _____
 - A. 0.15-1.5mm
 - B. 0.20-0.40mm
 - C. 0.5-1.5mm
 - D. 1-2mm
38. Centric relation id between _____
 - A. Maxilla to Cranium
 - B. Mandible to Cranium
 - C. Mandible to Condyle
 - D. Tooth to tooth
39. Adequate interocclusal rest space required for the comfort of the patient and health of the tissue is _____
 - A. 1-8mm
 - B. 4-6mm
 - C. 5-8mm
 - D. 2-4mm



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40. The term "chroma aspect" in selection of artificial teeth refers to _____
- A. Degree of saturation of hue
 - B. Intensity of value
 - C. Both value and hue
 - D. none of the above
41. The zero degree anatomic teeth is used in _____
- A. Sharp ridge
 - B. Flat ridge
 - C. Ridge with undercut
 - D. Well contoured ridge
42. Optimum crown to root ratio of the tooth to be used as abutment is _____
- A. 1:2
 - B. 2:3
 - C. 1:1
 - D. 2:1
43. Recommended convergence between opposing axial walls, which optimize retention, is _____
- A. 6 degree
 - B. 30 degree
 - C. 15 degree
 - D. 45 degree
44. The main disadvantage of metal ceramic restoration as compared to porcelain jacket crown is _____
- A. Less strength
 - B. Poor color matching
 - C. More porous
 - D. Less retentive
45. Contraindications of the metal ceramic crown, include _____
- A. Caries
 - B. Untreated periodontal disease
 - C. Patients with large pulp chambers
 - D. All of the above
46. Intra enamel depth preparation in porcelain laminate veneer _____
- A. 0.5mm
 - B. 0.75mm
 - C. 1mm
 - D. 2mm



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47. Dicor is _____
- A. Castable ceramic
 - B. Metavite
 - C. Vitallium
 - D. Vita ceramic
48. Reinforcing crystals in In-Ceram are made up of _____
- A. Alumina
 - B. Leucite
 - C. Zirconia
 - D. Glass
49. Dental implants that penetrate both the cortices of the bone and full thickness of alveolar bone are called as _____
- A. Endosteal implants
 - B. Sub periosteal implants
 - C. Transosseous implants
 - D. Endodontics implants
50. A patient came to dental OPD with missing lateral incisor and patient does not want bone grafting for the treatment. What will you give him for the first choice of treatment?
- A. FPD from Canine to Central Incisor
 - B. Cantilever from Canine to replace lateral
 - C. Cantilever from Premolar to Lateral
 - D. Resin bonded
51. In porcelain metal oxide helps in _____
- A. Imparts color and increase strength
 - B. Impart color and reduce strength
 - C. Increase viscosity
 - D. Decrease coefficient of thermal expansion
52. The rough surface of implant is _____
- A. Due to fabrication errors
 - B. Not desirable for osseointegration
 - C. Important to remove all the neck so that gingival plaque does not attach
 - D. Desirable for improved osseointegration
53. Excessive force on implant crowns results in _____
- A. Trauma to bone
 - B. Immediate fracture of implant components
 - C. Fatigue of implant components leading to fracture
 - D. No damage to implants because of their high resistance to force



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54. Which scaffold fabrication technique is most effective for creating highly anisotropic (aligned) nanofibrous structures that can mimic the native alignment of tissues like ligament or nerve?
- Gas Foaming
 - Freeze – Drying (Lyophilization)
 - Solvent Casting
 - Electrospinning
55. Which recent advancement in Zirconia is primarily aimed at improving its esthetic properties for anterior restorations?
- Introduction of Yttria-Stabilized Zirconia (YSZ) with higher Yttria content
 - Increased use of 3Y-TZP (3 mol% Yttria – stabilized Tetragonal Zirconia Polycrystal)
 - Reduction in sintering temperature
 - Development of Zirconia – reinforced Lithium Silicate (ZLS)
56. A key advantage of using Lithium Disilicate (LS2) for ultra thin veneers, which is currently being explored with Additive Manufacturing (AM) like Lithography-based Ceramic Manufacturing (LCM), is _____
- Superior fracture toughness compared to 3Y-TZP Zirconia.
 - Its ability to be etched with hydrofluoric acid for reliable resin bonding
 - Excellent wear resistance against opposing natural dentition.
 - The elimination of the need for any cementation step.
57. Which additive manufacturing technology is currently the most widely adopted and studied for the fabrication of permanent, high – strength ceramic restorations (like Zirconia or Lithium Disilicate) in a lab setting?
- Fused Deposition Modeling (FDM)
 - Selective Laser Melting (SLM)
 - Vat Photopolymerization
 - Binder Jetting (BJ)
58. The single most significant challenge that introduces dimensional inaccuracy in 3D – printed high strength ceramic dental restorations (eg Zirconia) after the printing phase is _____
- The low resolution of the printing light source (DLP/SLA)
 - Non uniform, anisotropic volumetric shrinkage during the debinding and high temperature sintering stages
 - Curing inhibition due to residual oxygen during photopolymerization.
 - Layer thickness variation



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59. The yield strength of Austenite (NITI alloy) is _____
- A. 100 Mpa
 - B. 240 Mpa
 - C. 560 Mpa
 - D. 700 Mpa
60. The single most significant challenge that introduces dimensional accuracy in 3D- printed high-strength ceramic dental restorations (eg Zirconia) after the printing phase is _____
- A. The low resolution of the printing light source(DLP/SLA)
 - B. Non-uniform,anisotropic volumetric shrinkage during the debinding and high temperature sintering stages.
 - C. Curing inhibition due to residual oxygen during photopolymerization.
 - D. Layer thickness variation(the stair stepping effect)
61. The disabilities associated with acquired maxillary defect are _____
- A. Speech
 - B. Swallowing
 - C. Appearance
 - D. All of the above
62. Which of the following prosthesis is indicated for patients having incompetent velopharyngeal sphincter ?
- A. Feeding device for infants
 - B. Palatal lift prosthesis
 - C. Expansion appliance
 - D. none of the above
63. A young patient got his front upper teeth extracted recently. The best pontic design for replacement is _____
- A. Ovate
 - B. Ridge lap
 - C. Sanitary pontic
 - D. Modified ridge lap
64. Flexibility of clasp depends on _____
- A. Composition and structure of material
 - B. Length and crosssection of the clasp
 - C. Amount of tempering and cold working
 - D. All of the above



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65. Porcelain binds to metal in PFM crown by _____
- A. Metallic bond
 - B. Mechanical bond
 - C. Chemical bond
 - D. B and C
66. Electrolyte used in plating copper dies is _____
- A. Ionic copper
 - B. Copper cyanide
 - C. Silver cyanide
 - D. Acidic copper sulphate
67. Chemical method of strengthening porcelain involves _____
- A. Exchange of aluminium and sodium ions
 - B. Exchange of aluminium and potassium ions
 - C. Exchange of sodium and potassium ions
 - D. None of the above
68. Hardness test of cobalt chromium alloy is checked by _____
- A. Rockwell test
 - B. Vicker's test
 - C. Heat and bend test
 - D. Cold blend test
69. Ante's law provides an aid for _____
- A. Selection of pontic
 - B. Selection of connector
 - C. Selection of retainers
 - D. Selection of abutments
70. Shade matching should be done within how many seconds to avoid fatigue of eyes to colour _____
- A. 5
 - B. 10
 - C. 15
 - D. 20

