

SEAL

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Series :

**A**

Question Booklet No.

**102570**

**GM/D/07/2024 EXAM.**

**2024**

**PAPER—I**

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Time : 2 Hours

Maximum Marks : 200

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GM/D/07/2024 EXAM. 2024/3-A

SEAL

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1. Which of the following is **not** a sealant material?

- [A] Resin-based sealants
- [B] Glass ionomer sealants
- [C] Polyacid modified resin sealants
- [D] Mineral trioxide aggregate

2. Which immunoglobulin is primarily targeted by a vaccine for dental caries?

- [A] IgG
- [B] IgM
- [C] IgA
- [D] IgE

3. The headquarters of UNICEF is situated in

- [A] Geneva, Switzerland
- [B] New York, USA
- [C] Paris, France
- [D] London, UK

4. The Nalgonda technique is primarily used for

- [A] water fluoridation
- [B] water defluoridation
- [C] water purification
- [D] desalination

5. An interdental cleaning aid is indicated to remove plaque from the interproximal tooth surface. This cleaning aid is known as

- [A] toothbrush
- [B] dental floss
- [C] mouthwash
- [D] toothpaste

6. A scale used to quantify attitudes and behaviours, where respondents select a response that best represents the rank or degree of their answer, is known as

- [A] nominal scale
- [B] ordinal scale
- [C] Likert scale
- [D] semantic differential scale

7. What is the optimum level of fluoride in water for the protection against dental caries?

- [A] 1 ppm
- [B] 2 ppm
- [C] 3 mg
- [D] 0.1 gram

8. Which study design proceeds backward from effect to cause?

- [A] Case-Control Study
- [B] Cohort Study
- [C] Cross-Sectional Study
- [D] Experimental Study

9. On which date is World No Tobacco Day observed?

- [A] April 7
- [B] May 31
- [C] June 5
- [D] July 1

10. The immunoglobulin predominantly present in saliva is

- [A] IgA
- [B] IgG
- [C] IgM
- [D] IgE



11. Deficiency of which vitamin results in angular stomatitis and cheilosis?

- [A] Vitamin B1
- [B] Vitamin B2
- [C] Vitamin C
- [D] Vitamin D



12. The first fluoride varnish developed in dentistry is the viscous material known as

- [A] fluor protector
- [B] duraphat
- [C] clinpro
- [D] vanish

13. The number of new cases of a specific disease occurring in a defined population during a specified period of time is called

- [A] prevalence
- [B] incidence
- [C] morbidity
- [D] mortality

14. A group of people who share a common characteristic or experiences within a defined time period is called

- [A] cohort
- [B] sample
- [C] population
- [D] frame

15. A disease seen in excess of normal in a community results in

- [A] epidemic
- [B] endemic
- [C] endozoic
- [D] pandemic

16. Which index is specifically used to evaluate the severity of dental fluorosis?

- [A] Dean's Index
- [B] DMFT Index
- [C] Plaque Index
- [D] Gingival Index

17. What does the DMFT index measure?

- [A] Dental caries status
- [B] Body mass index
- [C] Bone density
- [D] Blood pressure

18. Which term refers to the value that appears most frequently in a data set?

- [A] Mode
- [B] Median
- [C] Mean
- [D] Range


19. Which vitamin deficiency is associated with gingival bleeding?

- [A] Vitamin A
- [B] Vitamin B
- [C] Vitamin E
- [D] Vitamin K

20. Which type of microorganisms is **not** commonly found in dental plaque?

- [A] Streptococci
- [B] Actinomyces
- [C] Veillonella
- [D] Mycobacteria



21. Which index is used to assess the thickness of plaque at the gingival area of the tooth?
- [A] Plaque Index
  - [B] Gingival Index
  - [C] Plaque Control Record
  - [D] Bleeding Index
22. Which of the following terms refers to wastewater that **does not** contain human excreta?
- [A] Sullage
  - [B] Sewage
  - [C] Effluent
  - [D] Sludge
23. What is the term used for a substance applied with a toothbrush to clean the accessible surface of the teeth?
- [A] Mouthwash
  - [B] Dentifrices
  - [C] Dental floss
  - [D] Mouth rinse
24. Which of the following components are included in a balanced diet?
- [A] Only protein
  - [B] Only fat and carbohydrates
  - [C] Protein, fat and carbohydrates
  - [D] Protein, fat, carbohydrates and all essential nutrients
25. Predominant immunoglobulin in Gingival Crevicular Fluid (GCF) is
- [A] IgA
  - [B] IgE
  - [C] IgG
  - [D] IgM
26. Which of the following instruments has two-point contact with the tooth?
- [A] Hoe
  - [B] Sickle
  - [C] Curette
  - [D] Cumin
27. Pyogenic Granuloma is
- [A] malignant enlargement
  - [B] non-inflammatory enlargement
  - [C] false enlargement
  - [D] non-specific conditioned enlargement
28. Which of the following cells is responsible for external inflammatory root resorption?
- [A] Osteoclast
  - [B] Ameloblast
  - [C] Spiroclast
  - [D] Odontoblast
- 
29. Halitosis is primarily due to
- [A] H<sub>2</sub>S
  - [B] alkaline phosphates
  - [C] trypsin enzymes
  - [D] collagenase enzymes
30. Angulation of instrument for scaling and root planing is
- [A] 45°-90°
  - [B] 90°
  - [C] >90°
  - [D] 0°

31. Commonest osseous lesion in periodontitis is

- [A] crater
- [B] exostosis
- [C] hemiseptum
- [D] ledge



32. All are non-keratinized structures, **except**

- [A] col
- [B] junctional epithelium
- [C] sulcular epithelium
- [D] attached gingiva

33. Which of the following is **not** a property of acquired pellicle?

- [A] It is formed from salivary proteins
- [B] It influences the initial colonizer bacteria of oral cavity
- [C] It protects from erosive demineralization
- [D] It is a static layer that doesn't change with time unless cleaned

34. Trauma from occlusion has also been described in past as following terms, **except**

- [A] traumatic occlusion
- [B] traumatogenic occlusion
- [C] cervical occlusal resorption
- [D] periodontal traumatism

35. Bass tooth brushing technique is

- [A] scrubbing action
- [B] side to side vibration
- [C] rotational
- [D] vertical

36. Cellular infiltrate of sites that bleed in probing is predominantly

- [A] lymphocytes
- [B] neutrophils
- [C] plasma cells
- [D] fibroblast

37. Synthetic resorbable suture material used in periodontal surgery is

- [A] polyglycolic acid
- [B] ePTFE
- [C] nylon
- [D] chromic gut

38. Active ingredient in PerioChip is

- [A] minocycline
- [B] chlorhexidine
- [C] metronidazole
- [D] tetracycline

39. Vertical grooving is a periodontal surgical technique for

- [A] osteoplasty procedure
- [B] ostectomy procedure
- [C] Both [A] and [B]
- [D] None of the above

40. Which of the following is commonly associated with acute necrotizing ulcerative gingivitis?

- [A] HIV/AIDS
- [B] Hypertension
- [C] Hyperthyroidism
- [D] Atherosclerosis



41. In piezoelectric type of ultrasonic scaler
- [A] pattern of vibration is linear
  - [B] pattern of vibration is elliptical
  - [C] pattern of vibration is orbital
  - [D] All of the above
42. Which of the following is **not** a cause or risk factor of periodontal disease?
- [A] Calculus
  - [B] Microbial dental plaque
  - [C] One-sided chewing
  - [D] Both-sided chewing
43. The presence of clinically detectable attachment loss as a result of inflammatory destruction of the periodontal ligament and alveolar bone is indicative of
- [A] gingivitis
  - [B] periodontitis
  - [C] dental caries
  - [D] peri-implantitis
44. Smoking is a major risk factor for
- [A] gingivitis
  - [B] periodontitis
  - [C] Both [A] and [B]
  - [D] None of the above
45. A biomarker associated with periodontitis is
- [A] interleukin-6
  - [B] C-reactive protein
  - [C] matrix metalloproteinase-8
  - [D] tumor necrosis factor-alpha
46. Which of the following is **not** observed in periodontitis?
- [A] Increased serum or plasma level of cytokines
  - [B] Increased levels of interleukin 1-alpha
  - [C] Increased levels of C-reactive protein
  - [D] Increased levels of DSPP
47. The signs and symptoms of periodontitis do not include
- [A] pocket formation and increased tooth mobility
  - [B] pain and discomfort
  - [C] bad breath and bleeding
  - [D] white lesions on tongue
48. A disease initiated by specific bacteria in dental biofilm, where the signs and symptoms are a result of the host immune response to the bacteria and its byproducts is
- [A] gingivitis
  - [B] dental caries
  - [C] periodontitis
  - [D] peri-implantitis
49. The structure of dental calculus is
- [A] lamellar structure
  - [B] elliptical structure
  - [C] spheroidal structure
  - [D] conical structure
50. Necrotizing Ulcerative Gingivitis (NUG) is associated with which of the following bacteria?
- [A] Fusiform Bacilli and Spirochetes
  - [B] Streptococcus mutans
  - [C] Lactobacillus
  - [D] Porphyromonas gingivalis

51. Gingival enlargement, also known as gingival overgrowth, can be caused by the use of certain drugs. Which of the following drugs is associated with gingival enlargement?
- [A] Tetra hypochloric acid  
 [B] Simvastatin  
 [C] Calcium channel blockers (e.g., Nifedipine, Verapamil)  
 [D] Antihistaminic
52. Soft tissue accumulation of bacteria, food matter and tissue cells that lack the organized structure of dental biofilm and are easily displaced with water spray is known as
- [A] Dental Plaque  
 [B] Calculus  
 [C] Materia Alba  
 [D] Pellicle
53. What is the name of the most anterior point located midway between the frontal and nasal bones on the frontonasal suture?
- [A] Glabella  
 [B] Nasion  
 [C] Bregma  
 [D] Lambda
54. According to Angle's classification of malocclusion, which tooth is considered the key to occlusion?
- [A] Central incisor  
 [B] Canine  
 [C] First molar  
 [D] Second premolar
55. Which of the following is **not** an active component of a removable orthodontic appliance?
- [A] Bows  
 [B] Springs and screw  
 [C] Elastics  
 [D] Pinhead

56. The Frankel Appliance is an example of which type of orthodontic appliance?
- [A] Removal Appliance  
 [B] Functional Appliance  
 [C] Retention Appliance  
 [D] None of the above
57. Which of the following **does not** come under Andrews' six keys to normal occlusion?
- [A] Curve of Spee  
 [B] Tight contacts  
 [C] Absence of rotation  
 [D] Curve of Wilson
58. Which type of malocclusion is produced by a forward movement of the mandible during jaw closure?
- [A] Class III malocclusion  
 [B] Pseudo class III malocclusion  
 [C] Class II malocclusion  
 [D] Pseudo class II malocclusion
59. The formation of a diagnostic triangle using three planes is done in which of the following cephalometric analysis?
- [A] Tweed analysis  
 [B] Downs analysis  
 [C] Steiner analysis  
 [D] None of the above
60. According to orthodontic analysis, the ratio between the mesiodistal widths of the maxillary and mandibular teeth is known as
- [A] Downs analysis  
 [B] Tweed analysis  
 [C] Bolton analysis  
 [D] Steiner analysis





61. Which of the following is **not** a type of tooth movement?

- [A] Tipping
- [B] Bodily movement
- [C] Intrusion
- [D] Reverse anchorage

62. Which of the following teeth is most commonly extracted as part of orthodontic treatment?

- [A] Central incisor
- [B] First molar
- [C] First premolar
- [D] Third molar

63. What is **not** the objective of an orthodontic therapy?

- [A] Functional efficiency
- [B] Structural balance
- [C] Aesthetic harmony
- [D] Healing of periapical lesions

64. Who is the father of modern orthodontics?

- [A] Edward Angle
- [B] William Edwards
- [C] James Harris
- [D] John Doe

65. Electromyography is a procedure used for recording the electrical activity of

- [A] bone
- [B] muscle
- [C] both bone and muscle
- [D] None of the above

66. A surgical procedure which helps in development of new bone through incremental traction between segments of bone that have been separated deliberately is known as

- [A] cataract surgery
- [B] distraction osteogenesis
- [C] osteotomy
- [D] arthroplasty

67. What is the latency period in distraction osteogenesis?

- [A] 1-3 days
- [B] 5-7 days
- [C] 10-14 days
- [D] 3-4 weeks

68. The Edgewise technique was introduced by

- [A] Edward Angle
- [B] Eugene Roberts
- [C] Charles Tweed
- [D] James H. Downs

69. Which of the following is also known as Liverpool clasp or universal clasp?

- [A] Adams clasp
- [B] Ball-end clasp
- [C] T-bar clasp
- [D] Retentive clasp

70. The curve that contacts the buccal and lingual cusp tips of the mandibular buccal teeth is known as

- [A] Curve of Wilson
- [B] Curve of Spee
- [C] Curve of Monson
- [D] None of the above





71. Who proposed a modification of Angle's classification of malocclusion and divided Angle's Class I into 5 types and Angle's Class III into 3 types?

- [A] Edward Angle
- [B] Charles Tweed
- [C] William Downs
- [D] Charles Dewey

72. Which of the following is **not** a vertical plane?

- [A] Pog line
- [B] Facial plane
- [C] E plane
- [D] S-N plane

73. A non-radiographic method of mixed dentition analysis is suggested by

- [A] Tanaka and Johnston
- [B] Nance
- [C] Hixon and Oldfather
- [D] Moyer

74. Functional matrix theory is hypothesized by

- [A] Edward Angle
- [B] James Harris
- [C] Melvin Moss
- [D] Charles Burstone

75. A transient or self-correcting malocclusion seen in the maxillary incisor region between 8 to 9 years of age is called

- [A] Ugly Duckling Stage
- [B] Mixed Dentition Stage
- [C] Transition Stage
- [D] Early Adolescent Stage

76. The amount of leeway space is

- [A] greater in the mandibular arch
- [B] greater in the maxillary arch
- [C] equal in both arches
- [D] None of the above



77. The primate spaces are between

- [A] mesial to maxillary canine
- [B] distal to mandibular canine
- [C] maxillary first molars and second molars
- [D] Both [A] and [B]

78. What is WITS APPRAISAL?

- [A] Model Analysis
- [B] Cephalometric Analysis
- [C] Computer Analysis
- [D] Coronal Plane Analysis

79. Baker's Anchorage is a type of

- [A] intramaxillary anchorage
- [B] intermaxillary anchorage
- [C] extraoral anchorage
- [D] muscular anchorage

80. Which of the following is considered the simplest movement during orthodontic treatment?

- [A] Intrusion
- [B] Tipping
- [C] Extrusion
- [D] Bodily movement

81. The Begg appliance is a modification of which of the following?  
 [A] Ribbon Arch Technique  
 [B] E-Arch Technique  
 [C] Edgewise Technique  
 [D] Pin and Tube Technique
82. Bone age is best estimated by which of the following?  
 [A] Clinical evaluation of the patient  
 [B] Radiograph of the teeth  
 [C] Pedigree charts  
 [D] Radiograph of the wrist
83. A biopsy is advised to rule out squamous cell carcinoma if any lesion is non-healing and persistent for the minimum period of  
 [A] two to four weeks  
 [B] three to four months  
 [C] four to six days  
 [D] six months
84. The acute form of pseudomembranous candidiasis is known as  
 [A] Thrush  
 [B] Angular Cheilitis  
 [C] Denture Stomatitis  
 [D] Erythematous Candidiasis
85. Which of the following lesions are referred to as a Candida-associated infection, as they are always associated with a raised count of intraoral Candida?  
 [A] Denture Stomatitis and Angular Cheilitis  
 [B] Oral Lichen Planus and Geographic Tongue  
 [C] Herpes Simplex Virus Infection and Aphthous Stomatitis  
 [D] Behçet's Disease and Erythema Multiforme
86. Which of the following lesions is considered a pre-malignant condition?  
 [A] Submucous Fibrosis  
 [B] Squamous cell Carcinoma  
 [C] Herpes Simplex Virus Infection  
 [D] Aphthous Stomatitis
87. Wickham's striae is a hallmark of which of the following conditions?  
 [A] Lichen Planus  
 [B] Oral Candidiasis  
 [C] Pemphigus Vulgaris  
 [D] Behçet's Disease
88. Which of the following is **not** a clinical phenotype of lichen planus?  
 [A] Reticular type  
 [B] Erythematous type  
 [C] Ulcerative type  
 [D] Luminous type
89. Which of the following best describes a chronic inflammatory lesion that is a cell-mediated immune disease of unknown etiology?  
 [A] Pemphigus Vulgaris  
 [B] Lichen Planus  
 [C] Behçet's Disease  
 [D] Herpes Simplex Virus Infection
90. Which of the following best describes a lesion that is a white plaque of questionable risk, having excluded known diseases, infections or disorders?  
 [A] Leukoplakia  
 [B] Candidiasis  
 [C] Erythroplakia  
 [D] Lichen Planus





91. Necrotizing Ulcerative Gingivitis has a rapid and acute onset. The symptoms include everything mentioned below, **except**

- [A] excessive salivation
- [B] metallic taste
- [C] sensitivity of the gingiva
- [D] enamel hypoplasia



92. There is substantial evidence that lends support to a critical role of Areca nuts in the etiology of which of the following diseases?

- [A] Oral submucous fibrosis
- [B] Periodontal disease
- [C] Candidiasis
- [D] Herpes Simplex Virus Infection

93. The occipitomental projection is also known as the

- [A] lateral projection
- [B] Caldwell projection
- [C] Waters projection
- [D] Towne projection

94. A late complication of radiation therapy occurs when an area of irradiated bone becomes de-vitalized. This condition is known as

- [A] osteomyelitis
- [B] osteoradionecrosis
- [C] osteoporosis
- [D] osteosarcoma

95. Which of the following cells is the least radio-sensitive?

- [A] Neurons
- [B] Fibroblasts
- [C] Basal cells of oral mucosa
- [D] Bone marrow stem cells

96. The rapidly dividing cell will be

- [A] less radio-sensitive
- [B] more radio-sensitive
- [C] not radio-resistant
- [D] None of the above

97. A typical full mouth set of radiographs consists of

- [A] 15 periapical views and 4 bitewing views
- [B] 17 periapical views and 4 bitewing views
- [C] 4 periapical views and 17 bitewing views
- [D] 4 periapical views and 4 bitewing views

98. Plane radiographs, which project a three-dimensional volume onto a two-dimensional receptor, may produce an effect known as

- [A] Eggshell effect
- [B] Cloud effect
- [C] Morula effect
- [D] Dew XLF effect

99. The acronym SLOB in radiography stands for

- [A] Same-Lingual and Opposite Buccal
- [B] Same-Lateral Object and Opposite Buccal
- [C] Same-Lingual and Opposite Border
- [D] None of the above

100. In intraoral radiography, the position of an object can be determined with respect to a reference structure using the technique known as

- [A] paralleling technique
- [B] tube shift technique
- [C] bisecting angle technique
- [D] panoramic technique