

BKI
PROVISIONAL ANSWER KEY

Name of the post	Assistant Professor, Periodontology, Class-1 (Dental)
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THE LINK FOR ONLINE OBJECTION SYSTEM WILL START FROM 27-01-2025; 10:00 AM ONWARDS

Instructions / સૂચન

Candidate must ensure compliance to the instructions mentioned below, else objections shall not be considered: -

- (1) Candidates have to pay fees of Rs.100/- for each objection. The fees can be paid from the link given herewith.
- (2) The Candidate will be able to submit objection only after payment of the fees. The generation of the receipt will only be considered as final submission.
- (3) The Candidate must retain the receipt of the payment of the fees. The fees, once paid, will not be refunded under any circumstances.
- (4) All the objections should be submitted through **ONLINE OBJECTION SUBMISSION SYSTEM** only. Physical or submission through any other means will not be considered.
- (5) All objections are to be submitted with reference to the Master Question Paper published with provisional answer key, published herewith on the website / online objection submission system. Objections should be sent referring to the Question No. & options of the Master Question Paper. Objections regarding question nos. and options other than provisional answer key (Master Question Paper) shall not be considered.
- (6) Objections and answers suggested by the candidate should be in compliance with the responses given by him in his answer sheet. Objections shall not be considered, in case, if responses given in the answer sheet /response sheet and submitted objections are differed.
- (7) Supportive document to the objection must be uploaded, without which objection will not be considered.

ઉમેદવારે નીચેની સૂચનાઓનું પાલન કરવાની તકેદારી રાખવી, અન્યથા વાંધા-સૂચન અંગે કરેલ રજૂઆતો ધ્યાને લેવાશે નહીં

- (1) ઉમેદવારે દરેક વાંધા દીઠ રૂપિયા ૧૦૦/- ફી ભરવાની રહેશે. જે ફી આ સાથે આપેલ લીંક ઉપરથી ભરી શકાશે.
- (2) ફી ભર્યા બાદ જ વાંધો સબમીટ થઈ શકશે. ફી ભર્યાની આખરી પહોંચ જ આખરી સબમીશન ગણાશે.
- (3) ફી ભર્યાની પહોંચ ઉમેદવારે સાચવી રાખવાની રહેશે. એક વાર ભરેલ ફી કોઈ પણ પરિસ્થિતિમાં પરત આપવામાં આવશે નહિ.
- (4) વાંધા ફક્ત **ઓનલાઇન ઓબ્જેક્શન સબમીશન સીસ્ટમ** દ્વારા જ સબમીટ કરવાના રહેશે. રૂબરૂ, ટપાલ અથવા ઈ-મેઇલ કે અન્ય કોઈ રીતે આયોગને મોકલવામાં આવેલ વાંધા ધ્યાને લેવામાં આવશે નહીં, જેની ખાસ નોંધ લેવી.
- (5) ઉમેદવારે પોતાને પરીક્ષામાં મળેલ પ્રશ્નપુસ્તિકામાં છપાયેલ પ્રશ્નક્રમાંક મુજબ વાંધા-સૂચનો રજૂ ન કરતાં, તમામ વાંધા-સૂચનો વેબસાઇટ પર પ્રસિધ્ધ થયેલ પ્રોવિઝનલ આન્સર કી (માસ્ટર પ્રશ્નપત્ર) ના પ્રશ્નક્રમાંક મુજબ અને તે સંદર્ભમાં રજૂ કરવા. માસ્ટર પ્રશ્નપત્રમાં નિર્દિષ્ટ પ્રશ્ન અને વિકલ્પ સિવાયના વાંધા ધ્યાને લેવામાં આવશે નહીં.
- (6) ઉમેદવારે પ્રશ્નના વિકલ્પ પર વાંધો રજૂ કરેલ છે અને વિકલ્પ રૂપે જે જવાબ સૂચવેલ છે એ જવાબ ઉમેદવારે પોતાની ઉત્તરવહીમાં આપેલ હોવો જોઈએ. ઉમેદવારે સૂચવેલ જવાબ અને ઉત્તરવહીનો જવાબ ભિન્ન હશે તો ઉમેદવારે રજૂ કરેલ વાંધા ધ્યાને લેવાશે નહીં.
- (7) વાંધા માટે સંદર્ભ જોડવો આવશ્યક છે, જેના વિના વાંધો ધ્યાને લેવામાં આવશે નહીં.

Website link for online objection submission system: https://www.formonline.co.in/GPSC_TRACK/SearchPage.aspx

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- 1. The approximate time span required for neutrophils arising from bone marrow stem cells in a differentiation process to reach maturity is**
(A) 4 days (B) 7 days
(C) 14 days (D) 10 days
- 2. The adhesin of *Fusobacterium nucleatum* implicated for placental invasion in the context of adverse pregnancy outcomes is**
(A) Autotransporter
(B) FadA adhesin
(C) Fimbrial adhesion
(D) Pili adhesion
- 3. Exposure to tobacco smoking can be measured by**
(A) Systemic levels of cotinine
(B) Systemic levels of thiocyanate
(C) Exhaled carbon monoxide
(D) All of the above
- 4. The mean total viable counts of bacteria in saliva average is about**
(A) 10^4 per ml (B) 10^6 per ml
(C) 10^8 per ml (D) 10^{10} per ml
- 5. Which Mycobacterium is associated with tuberculous infection of cervical lymph nodes?**
(A) *M. Avium* (B) *M. Chelonae*
(C) *M. Kansaii* **(D) *M. Scrofulaceum***
- 6. The linear range of mechanical micro vibrations during cutting action of piezosurgery falls between**
(A) 30-50 μm
(B) 80-100 μm
(C) 200-250 μm
(D) 300-350 μm
- 7. ANRIL, a long intergenic noncoding RNA, expressed in tissues and cell types that are affected by atherosclerosis is located**
(A) Within the Chr2p11
(B) Within the Chr9p21
(C) Within the Chr6p21
(D) Within the Chr4p1

8. The acid used to demineralize the bone during formation of Demineralized freeze-dried bone allograft (DFDBA) is
- (A) Concentrated sulfuric acid
 - (B) Dilute hydrochloric acid**
 - (C) Dilute nitrous acid
 - (D) Concentrated hypophosphoric acid
9. Which of the following compounds has the longest half-life ($t_{1/2}$)?
- (A) Oxazepam
 - (B) Nitrazepam
 - (C) Temazepam
 - (D) Diazepam**
10. Which of the following local anesthetics is used exclusively for its good surface activity and low toxic potential?
- (A) Cocaine
 - (B) Benzocaine**
 - (C) Bupivacaine
 - (D) Procaine
11. The mechanism underlying the resistance of G+ve organisms to macrolides is
- (A) Decreased drug permeability of the cytoplasmic membrane.
 - (B) Methylation of binding sites on the 50-S ribosomal subunit.**
 - (C) Decreased activity of uptake mechanism.
 - (D) Formation of esterases that hydrolyze the lactone ring.
12. Phase II reactions of a drug biotransformation
- (A) Decrease its water solubility.
 - (B) Include activity of cytochrome P-450.
 - (C) Usually lead to inactivation of the drug.**
 - (D) Do not include acetylation.
13. The steady-state concentration of a drug can be doubled by
- (A) Doubling both the rate of infusion and concentration of drug.
 - (B) Doubling the rate of infusion only.**
 - (C) Doubling the loading dose but maintaining the infusion rate.
 - (D) Tripling the rate of infusion.

20. The first body organ to manifest hypoglycaemic symptoms is
 (A) Cerebral cortex
 (B) Hypothalamus
 (C) Vasomotor centre
 (D) Medulla
21. If one loses a large quantity of saliva externally, which one of the following ions would be lost in greater amount in relation to concentration in plasma?
 (A) Sodium (B) Chloride
 (C) Potassium (D) Magnesium
22. The antibody binding site is formed primarily by
 (A) Constant region of H and L chains
 (B) Variable region of H and L chains
 (C) Hypervariable regions of H and L chains
 (D) Variable region of L chain
23. The first virus discovered was
 (A) Herpes (B) Hepatitis
 (C) TMV (D) Papova Virus
24. The most characteristic feature of granulation tissue is the
 (A) Growth of fibroblasts and new capillaries
 (B) Resemblance to a granuloma
 (C) Character of the exudate
 (D) Presence of monocytes and fibroblasts
25. If a rare disorder with an early onset in life is inherited in such a way that male and female offspring are equally affected, only homozygous persons are affected, then the mode of inheritance would be
 (A) Autosomal dominant
 (B) Autosomal recessive
 (C) X-linked dominant
 (D) X-linked recessive
26. What amount of blood loss can be corrected by crystalloids?
 (A) 15-20% of blood loss
 (B) 50-70% of blood loss
 (C) up to 60% of blood loss
 (D) more than 70% of blood loss

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27. The most radioresistant cells are
- (A) Nerve and muscle fibres
 - (B) Spermatogonia and erythroblasts
 - (C) Epidermal stem cells
 - (D) Gastrointestinal stem cells
28. A reliable indicator of pubertal growth spurt on hand wrist films is sought as
- (A) Ossification of adductor sesamoid
 - (B) Appearance of hook of hamate
 - (C) Ossification of all the carpal bones
 - (D) Ossification of pisiform
29. The suture of choice when flaps involving several teeth are to be repositioned apically is
- (A) Interrupted interdental suture
 - (B) Modified mattress suture
 - (C) Continuous suture
 - (D) None of the above
30. An implant that is progressively losing its bone anchorage, but is still clinically stable can be termed as
- (A) Failed implant
 - (B) Failing implant
 - (C) Ailing implant
 - (D) Both A and C
31. Which of the following is an incorrect match regarding the tactile analog of the bone densities as classified by Misch?
- (A) D1: oak wood
 - (B) D2: balsa wood
 - (C) D3: spruce wood
 - (D) Both B and C
32. The initial incision for gingivectomy starts at
- (A) 2.5 mm to 3.0 mm from gingival margin
 - (B) 1.0 mm to 2.0 mm from gingival margin
 - (C) A point apical to the bleeding points as marked using pocket markers
 - (D) In the gingival sulcus

33. The width of the intrabony component of the bone defect is measured as the angle that the bony wall of the defect forms with the long axis of the tooth. The angles at which higher regeneration can be expected are
- (A) < 25 degrees
 - (B) 35-45 degrees
 - (C) 45-60 degrees
 - (D) > 90 degrees
34. The rate of formation of lamellar bone is
- (A) 1-5 $\mu\text{m}/\text{day}$
 - (B) 10-15 $\mu\text{m}/\text{day}$
 - (C) 15-25 $\mu\text{m}/\text{day}$
 - (D) 60-70 $\mu\text{m}/\text{day}$
35. Immediately after completion of Phase 1 therapy, the patient should be placed in
- (A) Maintenance phase
 - (B) Surgical phase
 - (C) Emergency phase
 - (D) Restorative phase
36. Frost gave four zones for bone related to mechanical adaptation to strain before spontaneous fracture. Which of the following is not one of the zones?
- (A) Chronic disuse window
 - (B) Mild overload window
 - (C) Pathologic overload window
 - (D) Adapted window
37. All of the following are ideal needle-thread combinations (non-resorbable) for use in Periodontal Microsurgery, except
- (A) Crestal incisions: suture gauge 7-0, 3/8 curvature, cutting needle with precision tip, needle length 11.2 mm, polyamide thread
 - (B) Interdental sutures, molar area : suture gauge 6-0, 3/8 curvature, cutting needle with precision tip, needle length 9 mm, polyamide thread
 - (C) Buccal releasing incisions: suture gauge 7-0, 3/8 curvature, cutting needle with precision tip, needle length 7.6 mm, polypropylene thread
 - (D) Papilla basis incisions: suture gauge 7-0, asymptomatic curved needle, cutting needle tip, round body, needle length 8.9 mm, polypropylene thread

38. All of the following are true regarding osseous craters except
- (A) Prevalence of crater defects is greater in the posterior regions
 - (B) Craters represent about two-thirds of all maxillary defects**
 - (C) The depth (dimension from crest of facial/lingual bone to crater base) of medium craters is around 5-7 mm
 - (D) The mesial and distal walls of the crater defect are composed of root surfaces of the adjacent teeth
39. Implant insertion is done at the speed of
- (A) 25-30 rpm** (B) 30-50 rpm
 - (C) 50-80 rpm (D) 80-100 rpm
40. Wavelength of diode laser used in periodontal procedure is
- (A) 655-980 nm** (B) 488-514 nm
 - (C) 1064 nm (D) 10600 nm
41. Which of the following is not true regarding Osseous Coagulum?
- (A) Low predictability
 - (B) Ease of procurement from an area already exposed during surgery
 - (C) Provides additional surface area for the interaction of cellular and vascular elements
 - (D) Contains a mixture of cancellous bone dust and blood**
42. All of the following are true except
- (A) Retrograde peri-implantitis refers to the presence of a lesion at the apex of the implant
 - (B) Early peri-implantitis is defined as the presence of an inflammatory lesion of infective etiology before the establishment of osseointegration**
 - (C) Early implant failures occur before implant restoration
 - (D) Late implant failures occur after implant restoration
43. All are true for LASERS in periodontal therapy except
- (A) Have the advantage of better visualization of cutting field
 - (B) The efficiency of ablation depends upon wavelength of the LASER and affinity of target tissue
 - (C) Er:YAG lasers are used at the wavelength of 1064 nm**
 - (D) The exposure of bone during laser therapy to temperatures above 47 degree centigrade can induce cellular damage and osseous resorption

44. *Leukocyte adhesion deficiency (LAD)* is a rare but well-defined autosomal recessive disease that results in the formation of
- (A) Non-functional ICAM receptor
 - (B) Defective TLR function
 - (C) Non-function of oxidative pathway
 - (D) Impaired assembly of microtubules in PMNs
45. The firm acellular fibrous protein layer on the surface of the gingiva contains
- (A) Actin
 - (B) Myosin
 - (C) Keratin
 - (D) Peptin
46. Which mandibular surface has the thinnest mucosa and heaviest bone with minimal interconnection between marrow and investing soft tissue?
- (A) Buccal surface
 - (B) Lingual surface
 - (C) Distal most surface
 - (D) Occlusal area
47. Endocarditis prophylaxis is recommended in
- (A) Previous coronary artery bypass graft surgery
 - (B) Cardiac pacemakers
 - (C) Implanted defibrillators
 - (D) Tetralogy of Fallot
48. Biological model of periodontitis was given by
- (A) Van Dyke
 - (B) Kornman
 - (C) Offenbacher
 - (D) Robertson
49. Classically the epithelial rete ridges show a saw tooth appearance, hyperkeratosis or parakeratosis, hydropic degeneration of basal layer and a dense band-like infiltrate of T-lymphocytes microscopically in
- (A) Pemphigus
 - (B) Pemphigoid
 - (C) Linear IgA disease
 - (D) Lichen planus

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50. Periodontal destruction is considered moderate when
- (A) 3-4 mm of clinical attachment loss has occurred in chronic periodontitis.
 - (B) 1-2 mm of clinical attachment loss has occurred in chronic periodontitis.
 - (C) 5 mm or more of clinical attachment loss has occurred in chronic periodontitis.
 - (D) 0-1 mm of clinical attachment loss has occurred.
51. Primary endodontic lesion requires
- (A) Minor periodontal treatment only
 - (B) Periodontal surgical treatment only
 - (C) A combined periodontal and endodontic treatment
 - (D) Endodontic treatment only
52. Hypophosphatasia is characterized by
- (A) High level of serum alkaline phosphatase and phosphoethanolamine.
 - (B) Low level of serum alkaline phosphatase and high level of phosphoethanolamine.
 - (C) Low level of serum alkaline phosphatase and low level of phosphoethanolamine.
 - (D) High level of alkaline phosphatase and low level of phosphoethanolamine.
53. Transseptal fibers extend
- (A) Obliquely from the cementum just beneath the junctional epithelium to the alveolar crest.
 - (B) From the cementum in a coronal direction obliquely to the bone.
 - (C) From the cementum to cementum in the furcation areas of the multirrooted teeth.
 - (D) Interproximally over the alveolar crest and are embedded in cementum of adjacent teeth.
54. The growth of porphyromonas gingivalis is enhanced by metabolic byproducts:
- (A) Succinate from campylobacter rectus.
 - (B) Protoheme from capnocytophaga.
 - (C) Protoheme from campylobacter rectus.
 - (D) Succinate from veillonella.
55. What is the first step before initiating treatment for necrotizing ulcerative periodontitis (NUP)?
- (A) Prescribing systemic antibiotics immediately
 - (B) Using ultrasonic instrumentation to flush lesions
 - (C) Performing surgical debridement without prior assessment
 - (D) Identifying systemic diseases and modifiable risk factors

56. Select the true statement:
- (A) all grafts are osteogenic
 - (B) all grafts are osteoinductive
 - (C) all grafts are osteoconductive
 - (D) FDA has osteoinductive potential
57. Mineralization of plaque may start intracellularly in
- (A) Streptococcus sanguis and actinomyces viscosus species.
 - (B) Porphyromonas gingivalis and prevotella intermedia species.
 - (C) Diptheroids, bacterionema, veillonella species.
 - (D) Borrelia vincenti and actinobacillus actinoemycetum comitans.
58. The incidence of lingual recession and pocket formation and radiographic evidence of bone loss among subjects with a mean age of 22 years who wore lingual “barbells” for 2 years or more according to Campbell et al is
- (A) 97%.
 - (B) 50%.
 - (C) 62%.
 - (D) 10%.
59. Select the false statement regarding free gingival graft.
- (A) Free gingival grafts are used to widen the zone of attached gingiva.
 - (B) Initially described by Bjorn in 1963
 - (C) The strip technique attains expansion of the graft by alternate incisions on opposite sides of the graft.
 - (D) Accordion technique described by Rateitschak and colleagues, increases the donor graft by changing the configuration of the tissue.
60. Distance between apical extent of calculus and alveolar crest in human periodontal pocket is
- (A) 0.2 mm
 - (C) 1.97 mm
 - (B) 3 mm
 - (D) 4 mm
61. The periodontal ligament is composed of 80 percent _____ collagen.
- (A) Type IV
 - (B) Type III
 - (C) Type II
 - (D) Type I
62. The epithelial mitotic cell turnover rate is highest within _____.
- (A) Oral sulcular epithelium
 - (B) Keratinized gingiva
 - (C) Epidermis of skin
 - (D) Junctional epithelium

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63. Early synostosis of sutures occurs in
(A) Craniofacial dysostosis
(B) Marble bone disease
(C) Osteitis deformans
(D) Cherubism
64. The developing mandible grows backward (not surrounding Meckel's cartilage) to form
(A) The incus and malleus
(B) The otic capsule
(C) The hyoid cartilage
(D) The coronoid process
65. In an acute upper airway obstruction, the entry to the airway on an emergency basis should be made at the
(A) cricoid cartilage
(B) thyroid notch
(C) cricothyroid membrane
(D) first tracheal ring
66. Cognitive theory of child development was given by
(A) Sigmund Fried
(B) Erik Erikson
(C) Jean Piaget
(D) Brenner
67. If a case of desquamative gingivitis on histological examination presents with replication of basal lamina with subepithelial vesicle formation, the causative disease could be
(A) Lichen planus
(B) Pemphigus
(C) Bullous pemphigoid
(D) All of the above
68. The Hering-Breuer reflex is primarily responsible for
(A) Preventing overinflation of the lungs
(B) Increasing heart rate during inspiration
(C) Regulating basal metabolic rate
(D) Adjusting renal blood flow

69. In 19th century, role of GCF in defence was elucidated by Brill and Krasse. The study was conducted on
- (A) Dogs (B) Rats
(C) Monkeys (D) Chimpanzee
70. The sulcular epithelium is permeable to substances with a molecular weight of up to
- (A) 1000 KD (B) 100 KD
(C) 100 D (D) 1000 D
71. According to the study by Wimmer and colleagues, which coping behaviour was more common among patients with periodontal disease compared to healthy individuals?
- (A) Emotional coping skills
(B) Active coping skills
(C) Situation control coping
(D) Problem-solving coping
72. Which of the following is true?
- (A) Smoking produces immediate transient increase in GCF
(B) Smoking produces prolonged increase in GCF
(C) Smoking produces immediate decrease in GCF
(D) Smoking has no effect on GCF flow
73. B cells found in established lesion are predominantly
- (A) IgG1/IgG2
(B) IgG1/IgG3
(C) IgG2/IgG3
(D) None of the above
74. Which of the following is an obligate intracellular organism?
- (A) Escherichia coli
(B) Chlamydia trachomatis
(C) Staphylococcus aureus
(D) Vibrio cholerae
75. The major determinant of loading dose of a drug is
- (A) Half life
(B) Clearance
(C) Volume of distribution
(D) Bioavailability

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76. CONSORT is used for which type of research?
(A) Systematic reviews and meta-analysis
(B) Parallel randomized control trials
(C) Observational studies
(D) Qualitative studies
77. What percent change of HbA1 can be expected 3 months after non-surgical periodontal therapy in patients with DM and chronic periodontitis?
(A) Approx. 0.5%
(B) Approx. 1%
(C) More than 1%
(D) None of the above
78. Which of the following is a derived protein?
(A) Protamines
(B) **Peptones**
(C) Prolamines
(D) Lactalbumin
79. Which of the following toxins is associated with scarlet fever?
(A) Exfoliative toxin
(B) Streptococcal pyrogenic exotoxin
(C) Botulinum toxin
(D) Tetanospasmin
80. Which of the following statement is false?
(A) Transseptal fibers are not destroyed in inflammation
(B) Transseptal fibers are present in the cases of extreme periodontal bone loss
(C) The dense transseptal fibers are encountered during periodontal flap surgery
(D) The dense transseptal fibers are one of the barriers that protects interdental bone from inflammatory process
81. Which marker is specific for T lymphocytes?
(A) CD19
(B) CD3
(C) CD34
(D) CD15
82. Which phase of the cardiac cycle involves the closure of the mitral and tricuspid valves?
(A) Atrial systole
(B) Isovolumetric contraction
(C) Ventricular ejection
(D) Isovolumetric relaxation

83. Mobile teeth are associated with higher proportion of which of the following bacteria than non-mobile teeth?
- (A) C.rectus and peptostreptococcus micros
 - (B) B.forsythia and p.gingivalis
 - (C) T.denticola and p.gingivalis
 - (D) Capnocytophaga and p.intermedia
84. Which segment of the ECG corresponds to ventricular depolarization?
- (A) P wave
 - (B) QRS complex
 - (C) T wave
 - (D) PR interval
85. Which type of receptor is involved in the stretch reflex?
- (A) Golgi tendon organ
 - (B) Muscle spindle
 - (C) Pacinian corpuscle
 - (D) Ruffini endings
86. STARD is used for which type of research?
- (A) Qualitative studies
 - (B) Observational studies
 - (C) Diagnostic accuracy studies
 - (D) Synthesis of qualitative research
87. Langer and mini langer curettes comprise a set of
- (A) #5-6, #7-8, #13-14
 - (B) #5-6, #7-8, #9-10
 - (C) #11-12, #13-14
 - (D) #3-4, #5-6, #9-10
88. Which of the following is true for Quetin furcation curettes?
- (A) BL-1 and MD-1 are small and fine, BL-2 and MD-2 are larger and wider
 - (B) BL-1 and MD-1 are larger and wider, BL-2 and MD-2 are small and fine
 - (C) BL-1 and MD-1 are small and fine, BL-3 and MD-3 are larger and wider
 - (D) BL-1 and MD-1 are larger and wider, BL-3 and MD-3 are small and fine

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89. What is the primary cause of fatty liver in chronic alcoholism?
(A) Lipid peroxidation
(B) Increased NADH production
(C) Hepatocyte necrosis
(D) Decreased bile synthesis
90. The most common bacteria implicated in causing infective endocarditis is
(A) Staphylococcus epidermidis
(B) Streptococcus viridans
(C) Escherichia coli
(D) Pseudomonas aeruginosa
91. What is C3 according to CDC classification for AIDS?
(A) AIDS and CD4 count < 200
(B) AIDS and CD4 count between 200 and 499
(C) Opportunistic infection and CD4 count < 200
(D) Opportunistic infection and CD4 count between 200 and 499
92. Which of the following statement is false?
(A) Pyrophosphate reduces deposition of new calculus on teeth
(B) It interferes with crystal formation in calculus
(C) Pyrophosphate containing toothpaste also affects subgingival calculus formation
(D) Pyrophosphate does not affect fluoride ion in paste or increase sensitivity
93. Which anesthetic agent is contraindicated in epilepsy?
(A) Xenon
(B) Enflurane
(C) Ketamine
(D) Ether
94. Exposure must precede the disease. This type of causal association is known as
(A) Biological plausibility
(B) Specificity of association
(C) Temporal association
(D) Biological gradient
95. When both tetracycline and amoxicillin are required as a part of antimicrobial therapy in periodontitis patient, they are best given
(A) Simultaneously
(B) Serially
(C) On alternative days
(D) One in the morning and one in the evening

96. What is triangulation?
(A) Use of a variety of data sources in a study
(B) Use of multiple methods to study in a situation or phenomenon
(C) Use of three investigators to conclude the study
(D) Use of multiple theories or hypothesis when examining a situation or phenomenon
97. The antibiotic to which all strains of actinobacillus are susceptible is
(A) Tetracycline (B) Metronidazole
(C) Clindamycin (D) Ciprofloxacin
98. FSH, LH, TSH act through
(A) Cyclic AMP
(B) Cyclic GMP
(C) Adenosine cyclate
(D) Calcium release
99. Doxycycline is used in local drug delivery system in periodontal therapy as
(A) 5% gel (B) 10% gel
(C) 15% gel (D) 20% gel
100. Evidence based decision-making is a compilation of
(A) Scientific evidence, operator's experience and judgement, patient's preference, clinical circumstances
(B) Operator's experience and judgement, patient's preference, clinical circumstances
(C) Scientific evidence, patient's preference, clinical circumstances
(D) Scientific evidence, operator's experience and judgement, clinical circumstances
101. How much force is specified for toothbrushing?
(A) 2N (B) 3N
(C) 4N (D) 5N
102. Which laser is effective for removing calculus from root surface?
(A) ER: YSGG (B) ER: YAG
(C) CO₂ (D) Diode
103. Which of the following is not correct CHX regime for full mouth disinfection?
(A) Rinsing with 0.2% CHX solution for 1 minute
(B) Brushing dorsum of tongue for 1 minute with 1% CHX gel
(C) Three subgingival irrigations with 0.2% CHX solution
(D) Spraying the tonsils with 0.2% CHX solution 4 times

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104. How is Koshy's method of full-mouth instrumentation protocol different from Wennstrom's?
(A) Full-mouth procedure in 45-60 minutes
(B) Full-mouth procedure in 2 hours
(C) Full-mouth procedure without time limit in single visit
(D) Full-mouth procedure without time limit but in multiple visits
105. Which of the following is not a part of PRA (Periodontal Risk Assessment)?
(A) Full mouth BOP %
(B) Number of teeth present
(C) Systemic/genetic conditions
(D) Number of sites with probing depth > 5 mm
106. What is the second step of algorithm for treatment of periodontitis?
(A) Behaviour and risk factor modification
(B) Cause-related therapy
(C) Surgical therapy
(D) Supportive periodontal care
107. Patient presents with probing depth ≤ 5 mm, some teeth removed due to deep carious activity, some teeth have undergone root canal, 3-4 mm interdental CAL. Patient also has history of smoking since 10 years. Identify the stage of periodontitis according to 2018 classification.
(A) Stage 1
(B) Stage 2
(C) Stage 3
(D) Stage 4
108. In the visual pathway, which cells are the first to generate action potentials?
(A) Rods and cones
(B) Bipolar cells
(C) Ganglion cells
(D) Amacrine cells
109. What is the most common cause of bad breath?
(A) Diet
(B) Stomach problem
(C) Tongue coating and periodontitis
(D) Stomach problem and periodontitis
110. Which of the following is not a diagnostic criteria for congestive heart failure?
(A) Neck vein distension
(B) Bradycardia
(C) Pleural effusion
(D) Acute pulmonary edema

111. What is the primary reason that Misch recommends for the use of "platform switching" in dental implant prosthetics?
- (A) To improve implant primary stability by reducing bone resorption at the implant neck
 - (B) To enhance the aesthetic outcome by positioning the abutment in a more favourable position related to the surrounding tissue
 - (C) To reduce the bacterial infiltration and enhance the healing process around the implant
 - (D) To increase the bone-implant contact area, thereby improving osseointegration
112. Which TLR is not present on neutrophils?
- (A) TLR 1
 - (B) TLR 2
 - (C) TLR 3
 - (D) TLR 4
113. The concept of hypotensive anesthesia was put forth by
- (A) Cushing
 - (B) Choi
 - (C) Ilizarov
 - (D) Davies
114. If a researcher undertakes followup study for a certain time period and concludes that the people increasingly develop the disease with time, then it is expressed as
- (A) Incidence
 - (B) Cumulative incidence
 - (C) Prevalence
 - (D) Relative risk
115. Degree of abrasive action in mechanical plaque control depends on
- (A) Use of abrasive dentifrices
 - (B) Use of hand toothbrush
 - (C) Vigorous toothbrushing
 - (D) All of the above
116. All of the following are proinflammatory in nature except
- (A) IL1 F6
 - (B) IL1 F8
 - (C) IL1 1F9
 - (D) IL1 F7
117. An ideal disclosing agent should have all of the following except
- (A) Adequate staining
 - (B) Acceptable taste
 - (C) Non-irritant
 - (D) Non-diffusible
118. What is the standard Pocket depth for referral to a periodontist?
- (A) 5 mm
 - (B) 5.4 mm
 - (C) ≥ 4 mm
 - (D) ≥ 6 mm

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119. Highly specific technique to identify bacterial species in biofilm is
(A) Bacterial culture
(B) FISH
(C) Immunofluorescence
(D) Cytofluorometry
120. Which of the following keratin is present in sulcular epithelium?
(A) K1
(B) **K4**
(C) K2
(D) K10
121. Metabolic syndrome comprises of all except
(A) Hydrocortisol levels
(B) Abdominal obesity
(C) Hypertension
(D) Hyperglycemia
122. Bisphosphonates interfere with which enzyme of Mevalonate pathway?
(A) GGPP synthase
(B) FPPS
(C) Mevalonate kinase
(D) Farnesyl transferase
123. As per Lindhe, the critical probing depth for performing periodontal flap surgery is
(A) 4.1 mm
(B) 4.2 mm
(C) 2.9 mm
(D) 3.0 mm
124. A ASA class 3 patient is described as
(A) Patient with severe systemic disease
(B) Patient with mild systemic disease
(C) Patient with severe systemic disease that is constant threat to life
(D) Moribund patient
125. The instrument used with a push stroke is
(A) Ochsenbein chisel #1 and #2
(B) Rhodes chisel
(C) Sickle scaler
(D) Back action chisel
126. The placement of the submarginal incision does not depend on
(A) Transgingival interdental probing depth
(B) Mucogingival junction
(C) Depth of the palatal vault
(D) Clinical attachment level

127. Modified Widman flap was given by
(A) Ramfjord and Nissle in 1972
(B) Robinson and Braden in 1974
(C) Ramfjord and Nissle in 1974
(D) Robinson and Braden in 1972
128. All the statements are false except
(A) EMD is a semi-purified protein preparation from developing porcine teeth that contains a mixture of LMW proteins.
(B) EMD is a purified protein preparation from developed porcine teeth that contains a mixture of LMW proteins.
(C) EMD is a purified protein preparation from developing porcine teeth that contains a mixture of LMW proteins.
(D) EMD is a semi-purified protein preparation from developed porcine teeth that contains a mixture of LMW proteins.
129. The critical temperature for bone cell necrosis during implant osteotomy is
(A) 116.6 degree F at an exposure time of 1 minute
(B) 47 degree F at an exposure time of 1 minute
(C) 47 degree Celsius at an exposure time of 2 minutes
(D) 116.6 degree Celsius at an exposure time of 1 minute
130. Maxillary sinus floor augmentation was first suggested by
(A) Tatum in 1980
(B) Boyne and James in 1980
(C) Tatum in 1982
(D) Boyne and James in 1982
131. Who developed chi square test?
(A) Park
(B) Karl Pearson
(C) John Graunt
(D) Pierre Denoix
132. Cornerstone of “precision health care” includes which of the following?
(A) Preventive, predictive, participatory, personalised
(B) Preventive, predictive, personalised
(C) Preventive, participatory, personalised
(D) Preventive, predictive, participatory
133. In all of the following, RNA participates directly except
(A) Post-translational modification
(B) Post-transcriptional modification
(C) DNA replication
(D) Splicing

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134. Both vitamin K and C are involved in
(A) The synthesis of clotting factors
(B) Post-translational modifications
(C) Antioxidant mechanisms
(D) The microsomal hydroxylation reactions
135. In a statistical study for calculating the effect of drug on patient's sugar level, if the test showed significant difference when in reality there was no difference, then this is
(A) Alpha error
(B) Beta error
(C) Gamma error
(D) Power of a test
136. Which of the following is an example of surrogate end point?
(A) Tooth loss
(B) Improved patient's quality of life
(C) Improved oral function
(D) Probing depth measurements
137. What is the mechanism of action of tetanus toxin?
(A) Blocks acetylcholine release
(B) Blocks inhibitory neurotransmitters
(C) Causes membrane pore formation
(D) Induces apoptosis
138. According to McGuire and Nunn (1996) classification of prognosis, poor prognosis is defined as
(A) Approx. 25% attachment loss or grade I furcation invasion
(B) Approx. 50% attachment loss , grade II furcation invasion
(C) Greater than 50% attachment loss or grade II furcation invasion
(D) Inadequate attachment loss to maintain health, comfort and function
139. Cessation of plaque control results in predominance of gram-negative microbes. These changes can be completely reversed in how many days after plaque control practices are resumed?
(A) 7 days
(B) 10 days
(C) 15 days
(D) 1 month
140. The most common mode of transmission of Legionella pneumophila is through
(A) Inhalation of aerosols
(B) Direct contact
(C) Fecal-oral route
(D) Blood transfusion

141. What is target hygiene concept?
- (A) Plaque biofilm removal at dento-gingival junction is necessary
 - (B) An individual should brush twice per day and floss once daily
 - (C) Daily biofilm control with mechanical cleaning
 - (D) Using chemical plaque control agents along with mechanical cleaning
142. Which of the following defines the power of a test to identify those who do not have the disease?
- (A) Sensitivity
 - (B) Specificity
 - (C) Positive predictive value
 - (D) Negative predictive value
143. Under NOHP, a dentist should be placed at which level of health care?
- (A) Primary health care
 - (B) CHC
 - (C) Sub center/district
 - (D) Health and wellness clinics
144. Which of the following statement is true for type B autoclave?
- (A) Has vacuum cycle for drying
 - (B) Has gravity displacement for drying
 - (C) Has unsterilized chemical vapour for sterilization
 - (D) Use dry heat as a sterilization source
145. Which of the following correctly describes PICO?
- (A) Problem or population (P), intervention (I), comparison group (C) and outcomes (O)
 - (B) Problem or population (P), identification (I), comparison group (C) and outcomes (O)
 - (C) Problem or population (P), identification (I), control group (C) and outcomes (O)
 - (D) Problem or population (P), intervention (I), control group (C) and outcomes (O)
146. Metronidazole is not a drug of choice for treating
- (A) Aa. comitans
 - (B) P. gingivalis
 - (C) Prevotella intermedia
 - (D) Spirochetes

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147. The principle of electrically active toothbrush is
(A) Oscillation-rotation
(B) Electromagnetic current
(C) Eliminating H⁺ ions from plaque
(D) Generating voltage potential to the brush
148. INH induced peripheral neuropathy results from the deficiency of vitamin:
(A) B1 (B) B2
(C) B6 (D) B12
149. Halita mouthwash is composed of all of the following except
(A) 0.05% CHX
(B) 0.05% CPC
(C) 0.14% Zn lactate
(D) 0.12% CHX
150. Treatment of choice in hypertension with diabetes mellitus is
(A) Beta-blockers
(B) Thiazides
(C) ACE inhibitors
(D) Calcium channel blockers
151. Which of the following adverse effect is likely to increase when carbamazepine is added to valproate?
(A) Hepatotoxicity
(B) Thrombocytopenia
(C) Pancreatitis
(D) Hyperammonemia
152. Hospice refers to
(A) Group of professionals who provide counselling to families
(B) Colostomy bag provision by an association of colostomy patients in USA
(C) Euthanasia for cancer patients
(D) Special group of people helping the old and terminally ill patients
153. Which of the following describes the progression of foci of calcification as calculus formation advances?
(A) They initially become basophilic and transition to eosinophilic staining properties
(B) They transition from eosinophilic to basophilic with a reduced bacterial presence
(C) They maintain a constant staining intensity, showing no alterations
(D) They disappear altogether as calcification progresses

154. What is meant by the concept of a “contained” gingivitis as proposed by Seymour and colleagues?
(A) A state where no lymphocytes are involved in the lesion.
(B) A gingivitis stage with T lymphocytes predominate but has not progressed to B-lymphocyte involvement.
(C) A state in which the bacterial biofilm has been entirely cleared.
(D) A stage where plasma cells are dominant but disease progression has halted.
155. Increase in lactate and pyruvate is seen in the deficiency of
(A) Pyridoxin (B) Niacin
(C) Thiamine (D) Retinoic acid
156. Propaganda is defined as
(A) Forcing of knowledge into mind
(B) Active acquiring of knowledge
(C) Requiring knowledge after thinking
(D) Training of people to use judgement before acting
157. Which device uses air pressure to create mechanical vibration?
(A) Sonic scaler
(B) Ultrasonic scaler
(C) Piezoelectric scaler
(D) Modified sonic
158. Tissue re-evaluation after phase I therapy is done after
(A) 2 weeks (B) 4 weeks
(C) 3 weeks (D) 6 weeks
159. The fuel value of fat is
(A) 4 (B) 7
(C) 9 (D) 5
160. The term 'deep cementopathia' was given by
(A) Gottlieb in 1923
(B) Gottlieb in 1928
(C) Wannemacher
(D) Butler
161. D5 bone is present in
(A) Anterior maxilla
(B) Posterior maxilla
(C) Poorly mineralized bone graft
(D) Cortical bone graft

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162. All are the components of basement membrane except
- (A) Nitrogen
 - (B) Laminin
 - (C) Eutactin
 - (D) Rhodopsin**
163. What increases the risk of bone loss on the distal surface of the second molar?
- (A) Early extraction of third molars before the roots are fully formed
 - (B) Extracting third molars after their roots are completely formed in older patients**
 - (C) Not removing peri-coronal debris and failing to evaluate occlusion
 - (D) Surgical reduction of the peri-coronal flap without repositioning distal tissue
164. Leukemic gingival enlargement
- (A) Occurs in chronic leukemia.
 - (B) Occurs by abnormal accumulation of leukemia cells in dermal and subcutaneous connective tissue.
 - (C) Occurs by dense cellular accumulation in papillary layer of connective tissue.
 - (D) Occurs by dense cellular accumulation in reticular layer of connective tissue.**
165. Which of the following muscle is the ' safety' muscle of larynx?
- (A) Lateral cricoarytenoid
 - (B) Posterior cricoarytenoid**
 - (C) Oblique arytenoid
 - (D) Transverse arytenoids
166. Which of the following is more sensitive and higher degree of reproducibility?
- (A) Subtraction Radiography
 - (B) CADIA Radiography**
 - (C) Digital Radiography
 - (D) Conventional Radiography
167. What T-cell subset is the predominant phenotype in stable periodontal lesions, and how might its alterations contribute to periodontal disease progression?
- (A) CD8 + cytotoxic T cells; they inhibit inflammatory responses.
 - (B) Th2 cells; their predominance prevents the activation of macrophages.
 - (C) Th1 cells; their overactivation leads to a reduced ability to clear B-cell responses.
 - (D) CD4+ helper T cells; their imbalance can lead to a shift toward a destructive, B-cell-dominated lesion**

168. Which type of implant is characterized by its design, where the implant is inserted into a hole prepared in the jawbone?
- (A) Subperiosteal implant
 - (B) Endosteal implant
 - (C) Transosteal implant
 - (D) Plate form implant
169. How does the lacto peroxidase-thiocyanate system exert its bactericidal effects?
- (A) By cleaving glycopeptide linkages in bacterial cell walls
 - (B) By preventing the accumulation of lysine and glutamic acid, which are essential for bacterial growth
 - (C) By directly targeting bacterial membranes with defensins
 - (D) By inhibiting bacterial attachment to hydroxyapatite
170. Which of the following is a distinguishing feature of *Stage III Periodontitis* compared to Stage II?
- (A) Probing depths ≤ 5 mm
 - (B) Coronal third of the root bone loss only
 - (C) Presence of vertical bone loss ≥ 3 mm
 - (D) Bone loss involving less than 15% of the teeth
171. Periodontal surgical intervention should be considered after phase I therapy for patients with clinical attachment loss of
- | | |
|---|----------------|
| <input checked="" type="radio"/> (A) > 5 mm | (B) $> = 4$ mm |
| (C) 3 mm | (D) 2 mm |
172. Statement 1: The width of the attached gingiva is an important clinical parameter in evaluating periodontal treatment outcome.
Statement 2: The width of the attached gingiva primarily corresponds to the width of the free marginal gingiva.
- Considering the given statements, which of the following is correct?
- (A) Both statements are true.
 - (B) Both statements are false.
 - (C) The first statement is true and the second statement is false.
 - (D) The first statement is false and the second statement is true.
173. Papillon Lefevre is caused by mutation in which gene?
- (A) COL1 A1 (collagen)
 - (B) Adenomatous polyposis coli (APC)
 - (C) Osteopontin
 - (D) Cathepsin C
174. Which histological stage of gingivitis is characterized with predominance of T-lymphocytes?
- | | |
|--|-----------------|
| <input checked="" type="radio"/> (A) early | (B) established |
| (C) initial | (D) advanced |

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175. Halimeter is sensitive to the detection of
(A) Methylmercaptan (B) Hydrogen sulphide
(C) Ethanol (D) Dimethylsulphide
176. Which of the following cement bonds to tooth structure, has an anticariogenic effect, has a degree of translucency and does not irritate the pulp?
(A) Polycarboxylate cement
(B) Resin cement
(C) Silicate cement
(D) Glass ionomer cement.
177. 3As of Smoking cessation includes all except
(A) Ask (B) Assess
(C) Advice (D) Act
178. It is necessary to avoid the ingestion of tetracyclines between the age groups from
(A) 4 months to 7 years (B) 1 year to 3 years
(C) 4 months to 10 months (D) 7 months to 5 years
179. Time required for calcification of half of calculus is
(A) 24 hr (B) 48 hr
(C) 96 hr (D) 72 hr
180. Xeroradiography was invented by
(A) Chester F. Carlson in 1937
(B) Simon
(C) Hudson Kampula and Dickson in 1957
(D) Hofrath and Broadbent in 1934
181. All are the branches of third part of maxillary artery except
(A) Sphenopalatine
(B) Middle meningeal
(C) Greater palatine
(D) Posterior superior alveolar
182. Western blotting is a technique used in the determination of
(A) DNA (B) RNA
(C) Protein (D) Polysaccharides

183. Truss arm is
- (A) Reciprocal arm
 - (B) Retentive arm
 - (C) Minor connector
 - (D) Major connector
184. Non-bone graft materials used in periodontal surgery include
- (A) Cartilage, cementum, xenograft.
 - (B) Dentin, Plaster of Paris, allografts.
 - (C) Ceramics, coral derived materials, autografts.
 - (D) Cartilage, sclera, dura, dentin, cementum.
185. Identify the risk predictor for periodontal disease from the following:
- (A) HIV
 - (B) Osteoporosis
 - (C) Previous history of periodontitis
 - (D) Diabetes
186. A 40 years diabetic patient, presents clinically with periodontal attachment loss and diagnosed as having periodontitis. According to AAP 1999 classification of periodontal diseases, the type of periodontitis in this case is
- (A) Aggressive periodontitis
 - (B) Periodontitis as a manifestation of systemic disease
 - (C) Chronic periodontitis modified by systemic condition
 - (D) Generalized aggressive periodontitis
187. Which of the following genetic disorders is not associated with periodontal disease?
- (A) Down syndrome
 - (B) Cyclic neutropenia
 - (C) Hypophosphatasia
 - (D) Oral-facial-digital syndrome
188. Critical zone in pocket surgery includes all except
- (A) Soft tissue pocket wall
 - (B) Attached gingiva
 - (C) Connective tissue
 - (D) Tooth surface

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189. Major aim of phase 1 clinical trials is to know the
(A) Safety
(B) Efficacy
(C) Maximum tolerable dose
(D) Pharmacokinetics
190. All of them are interdental knives except
(A) Orbans knife #1
(B) Merrifield knife #4
(C) Kirkland knife
(D) Merrifield knife #1
191. Which of the following DIGO can coexist with periodontitis?
(A) Phenytoin induced
(B) Nifedipine induced
(C) Cyclosporine induced
(D) None of the above
192. 3-walled defects are more frequently found on
(A) Mesial surface of upper and lower molars
(B) Distal surface of upper and lower molars
(C) Mesial surface of upper and lower premolars
(D) Distal surface of upper and lower premolars
193. Which of the following is not a primary feature of aggressive periodontitis?
(A) Rapid loss of attachment
(B) Subject is otherwise healthy
(C) Familiar aggregation
(D) Hyperresponsive macrophage
194. Subclinical gingivitis is
(A) Characterized by vascular proliferation
(B) Characterized by predominant lymphocytes
(C) Characterized by increased crevicular fluid and infiltration of S.E. and J.E. by PMN
(D) Characterized by predominantly plasma cells microscopically
195. The basic types of electrosurgical techniques are
(A) electro section, electrocoagulation, electro fulguration and electrodesiccation
(B) electrocoagulation, electro fulguration and electro section
(C) electro section and electro fulguration
(D) electrocoagulation, electrodesiccation and electro section

196. The following statements regarding internal bevel incision are all true except
- (A) removal of pocket lining
 - (B) conserves the relatively uninvolved outer surface of the gingiva
 - (C) produces a sharp, thin flap margin for adaptation to the bone-tooth junction
 - (D) directed coronally towards the tooth apical to the bottom of the periodontal pocket**
197. A patient is on warfarin therapy. All of the following drugs increase the risk of bleeding with warfarin except
- (A) Isoniazid
 - (B) Amiodarone
 - (C) Carbamazepine**
 - (D) Cimetidine
198. Select the correct sequence of procedure for osseous surgery.
- (A) Radicular blending, Vertical grooving, Gradualizing marginal bone, Flattening interproximal bone
 - (B) Vertical grooving, Radicular blending, Flattening interproximal bone, Gradualizing marginal bone**
 - (C) Vertical grooving, Gradualizing marginal bone, Radicular blending, Flattening interproximal bone
 - (D) Vertical grooving, Flattening interproximal bone, Gradualizing marginal bone, Radicular blending
199. Fenestration in implant is
- (A) Exposure of axial surface with coronal surface unexposed**
 - (B) Exposure of collar of implant
 - (C) Exposure of both axial and coronal surface
 - (D) Intact axial and coronal surface
200. What is the main disadvantage of using a large-diameter implant in areas with limited bone volume?
- (A) Increased risk of implant failure due to stress overload on surrounding bone**
 - (B) Increased risk of peri-implantitis due to plaque accumulation
 - (C) Difficulty in achieving adequate osseointegration
 - (D) Higher cost of implant placement
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SPACE FOR ROUGH WORK

