

BBM

PROVISIONAL ANSWER KEY (CBRT)

Name of the post	Tutor Orthodontics and Dento Facial Orthopaedics, General State Service, Class-2
Advertisement No.	11/2021-22
Preliminary Test held on	17-10-2021
Question No	001 - 200
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Last Date to Send Suggestion(s)	25-10-2021

THE LINK FOR ONLINE OBJECTION SYSTEM WILL START FROM 19-10-2021; 04:00 PM ONWARDS

Instructions / સૂચન

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

- (1) All the suggestion should be submitted through **ONLINE OBJECTION SUBMISSION SYSTEM** only. Physical submission of suggestions will not be considered.
- (2) Question wise suggestion to be submitted in the prescribed format (proforma) published on the website / online objection submission system.
- (3) All suggestions are to be submitted with reference to the Master Question Paper with provisional answer key (Master Question Paper), published herewith on the website / online objection submission system. Objections should be sent referring to the Question, Question No. & options of the Master Question Paper.
- (4) Suggestions regarding question nos. and options other than provisional answer key (Master Question Paper) shall not be considered.
- (5) 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 suggestions are differed.
- (6) Objection for each question should be made on separate sheet. Objection for more than one question in single sheet shall not be considered.

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

- (1) ઉમેદવારે વાંધા-સૂચનો ફક્ત ઓનલાઇન ઓબ્જેક્શન સબમીશન સીસ્ટમ દ્વારા જ સબમીટ કરવાના રહેશે. રૂબરૂ અથવા ટપાલ દ્વારા આયોગની કચેરીએ મોકલવા આવેલ વાંધા-સૂચનો ધ્યાને લેવામા આવશે નહીં જેની ખાસ નોંધ લેવી.
- (2) ઉમેદવારે વાંધા-સૂચનો રજૂ કરવા વેબસાઇટ / ઓનલાઇન ઓબ્જેક્શન સબમીશન સીસ્ટમ પર પ્રસિધ્ધ થયેલ નિયત નમૂનાનો જ ઉપયોગ કરવો.
- (3) ઉમેદવારે પોતાને પરીક્ષામાં મળેલ પ્રશ્નપુસ્તિકામાં છપાયેલ પ્રશ્નક્રમાંક મુજબ વાંધા-સૂચનો રજૂ કરતા તમામ વાંધા-સૂચનો વેબસાઇટ પર પ્રસિધ્ધ થયેલ પ્રોવિઝનલ આન્સર કી (માસ્ટર પ્રશ્નપત્ર)ના પ્રશ્ન ક્રમાંક મુજબ અને તે સંદર્ભમાં રજૂ કરવા.
- (4) માસ્ટર પ્રશ્નપત્રમાં નિર્દિષ્ટ પ્રશ્ન અને વિકલ્પ સિવાયના વાંધા-સૂચનો ધ્યાને લેવામાં આવશે નહીં.
- (5) 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-સૂચનો ધ્યાનમા લેવાશે નહીં.
- (6) એક પ્રશ્ન માટે એક જ વાંધા-સૂચન પત્રક વાપરવું. એક જ વાંધા-સૂચનો પત્રકમાં એકથી વધારે પ્રશ્નોની રજૂઆત કરેલ હશે તો તે અંગેના વાંધા-સૂચનો ધ્યાને લેવાશે નહીં.

Website link for online objection submission system : www.safevaults.in/login

001. Which of the following structure does not pass through the foramen magnum
(A) Vertebral arteries (B) Spinal accessory nerve
(C) Medulla oblongata (D) Glossopharyngeal nerve
002. Identify the largest cranial nerve
(A) Facial nerve (B) Trigeminal nerve
(C) Vagus nerve (D) Trochlear nerve
003. Stylohyoid muscle is derived from
(A) First branchial arch (B) Second branchial arch
(C) Third branchial arch (D) Fourth branchial arch
004. Which of the following hormones are produced by pancreas:
(A) Glucagon (B) Insulin
(C) Somatostatin (D) All of the above
005. All of the following are contents of submandibular space except
(A) Hypoglossal nerve (B) Nerve to mylohyoid
(C) Facial artery (D) Facial nerve
006. Cyst causing elevation of the ala of the nose is
(A) Globulomaxillary cyst (B) Nasopalatine cyst
(C) Nasolabial cyst (D) Dermoid cyst
007. Number of essential amino acid is
(A) 11 (B) 13
(C) 8 (D) 9
008. Major buffer present in saliva is
(A) Ammonia (B) Phosphates
(C) Bicarbonate (D) Urea
009. All of the following are plasma protein except
(A) Albumin (B) Fibrinogen
(C) Collagen (D) Gamma globulin
010. Angle's system of Classification was published in:
(A) 1901 (B) 1912
(C) 1899 (D) 1900
011. Which of the following tongue papillae do not contain taste bud
(A) Circumvallate (B) Fungiform
(C) Filiform (D) None of the above
012. Erythropoietin is produced by
(A) Lungs (B) Spleen
(C) Liver (D) Kidney
013. Treacher Collin syndrome is
(A) Craniofacial dysostosis (B) Progressive hemifacial atrophy
(C) Cleidocranial dysostosis (D) Mandibulofacial dysostosis

014. Tooth arising within first 30 days of life are called
 (A) Natal tooth (B) Supernumerary tooth
 (C) Neonatal tooth (D) None of the above
015. Blue, dome shaped, fluctuant swelling in the floor of the mouth is associated with
 (A) Mucocele (B) Sialolithiasis
 (C) Ranula (D) Sialadenitis
016. Which of the following condition is characterized by “hair-on-end” appearance of skull radiograph
 (A) Aplastic anaemia (B) Thalassemia
 (C) Cyclic neutropenia (D) Leukemia
017. All of the following are true about pernicious anaemia except
 (A) Caused by deficiency of vitamin B₆ (B) Glossitis
 (C) Associated with “intrinsic factor (D) Neurologic dysfunction
018. In Scammon’s growth curve, which of the following tissue system shows s-shaped curve
 (A) General (B) Neural
 (C) Genital (D) Lymphoid
019. Vital stain used in orthodontics for skeletal growth study is
 (A) Iodine red (B) Toluidine blue
 (C) Alizarin red (D) Methylene blue
020. Cranial vault is formed by
 (A) Intramembranous ossification (B) Endochondral ossification
 (C) Both (A) and (B) (D) None of the above
021. Primate spaces are useful for:
 (A) Central incisor positioning (B) Lateral incisor positioning
 (C) Canine positioning (D) 1st Premolar positioning
022. Erikson had given how many stages of emotional development
 (A) 5 (B) 9
 (C) 7 (D) 8
023. Central mid-face deficiency is caused by which teratogen
 (A) Aspirin (B) Dilantin
 (C) Vitamin D excess (D) Ethyl alcohol
024. Amount of canine expansion which is considered stable in the mandibular arch
 (A) 0-1 mm (B) 2-3mm
 (C) 3-4mm (D) 2mm
025. Optimum force required for bodily movement of tooth
 (A) 35-60 gm (B) 70-120 gm
 (C) 10-20 gm (D) 50-100

026. Which of the following statement is true about obligate anaerobe
- (A) Require oxygen for growth.
 - (B) Cannot grow in oxygenated environment.
 - (C) Grow aerobically when oxygen is present, but use fermentation pathway in its absence.
 - (D) None of the above.
027. NRHM (National Rural Health Mission) started in which year?
- (A) 2002
 - (B) 2005
 - (C) 2006
 - (D) 2011
028. Interincisal angle between deciduous incisors:
- (A) 150 degrees
 - (B) 131 degrees
 - (C) 140 degrees
 - (D) 179 degrees
029. Measles and mumps virus belongs to which group of virus
- (A) Rhabdovirus
 - (B) Paramyxovirus
 - (C) Filovirus
 - (D) Coronavirus
030. Chemically, chlorhexidine gluconate belongs to
- (A) Peroxide
 - (B) Bis-phenol
 - (C) Bis-biguanide
 - (D) Alcohol
031. Which of the following tissue does not regenerate
- (A) Bone
 - (B) Cartilage
 - (C) Cardiac muscle
 - (D) Intestinal mucosa
032. Predominant cells in cell mediated immunity are
- (A) B-lymphocytes
 - (B) T-lymphocytes
 - (C) Immunoglobulin
 - (D) Both B-lymphocyte and immunoglobulin
033. Of the following, which is the least reliable way to predict the timing of the peak of the adolescent growth spurt for an individual?
- (A) Plotting changes in height over time on a growth curve
 - (B) Following eruption timing of the dentition
 - (C) Taking a hand-wrist radiograph to assess skeletal development
 - (D) Observing changes in secondary sex characteristic
034. Which of the following is the most likely cause of pulpal necrosis following trauma to a tooth?
- (A) Ankylosis
 - (B) Calcific metamorphosis
 - (C) Pulpal hyperaemia
 - (D) Dilaceration
035. Which of the following are growth sites in maxilla
- (A) Nasal Septum
 - (B) Sutures
 - (C) Maxillary Tuberosity
 - (D) All of the above

036. When class III elastics are used, the maxillary first molar will
 (A) Move distally and intrude
 (B) Move mesially and extrude
 (C) Move mesially and intrude
 (D) Move only mesially; there will be no movement in vertical direction
037. Of the following, which is considered to be the least stable orthognathic surgical movement
 (A) Advancement of the mandible
 (B) Advancement of the maxilla
 (C) Superior movement (impaction) of the maxilla
 (D) Inferior movement of the maxilla
038. Which of the following reaction is least likely to be observed during orthodontic treatment
 (A) Root resorption (B) Devitalization of teeth that are moved
 (C) Mobility of the tooth that are moved (D) Development of occlusal interferences
039. Stainless steel orthodontic arch wire can be hardened by
 (A) Tempering (B) Work hardening
 (C) Age hardening (D) Precipitation hardening
040. When the orthodontic force applied is light, resorption will probably be
 (A) Apical (B) Direct
 (C) Indirect (D) Undermining
041. A major disadvantage of treatment using cervical headgear is
 (A) Impaction of maxillary canine (B) Extrusion of maxillary incisors
 (C) Extrusion of maxillary molars (D) Potential deformity of the neck
042. Orthodontic correction of which of the following is most easily retained
 (A) Diastema (B) Rotation
 (C) Posterior crossbite (D) Anterior crossbite
043. Severely crowded mandibular incisors usually result from
 (A) Mesial migration of teeth (B) Premature loss of primary teeth
 (C) Presence of supernumerary tooth (D) Tooth size arch length discrepancy
044. Surgical procedures on the maxilla may alter its
 (A) Anterior portion only
 (B) Posterior height only
 (C) Length and anteroposterior position only
 (D) Length, width and height
045. For 1mm retraction space required is
 (A) 0.5 mm (B) 1 mm
 (C) 1.5 mm (D) 2 mm
046. In which of the following analysis, measurement of lower incisor is not done
 (A) Moyer's (B) Staley Kerber
 (C) Tanaka & Johnson (D) Huckaba

047. Which of the following is precisely marked on cephalogram
 (A) Point A (B) Nasion
 (C) Gonion (D) Condylion
048. Which is true regarding In-ovation-L.
 (A) Self ligating bracket system (B) Computer controlled 3D bracket
 (C) Clear aligner system (D) None of the above
049. In which stage of tooth development, structures like enamel knot, enamel cord and enamel septa appear?
 (A) Bud stage (B) Cap stage
 (C) Early bell stage (D) Advanced bell sage
050. What is the mean daily rate of enamel formation during formation of crown?
 (A) 6.8 um (B) 3.5 um
 (C) 4.6 um (D) 2.5 um
051. Life span of cells of inner enamel epithelium can be divided into
 (A) 4 stages (B) 3 stages
 (C) 5 stages (D) 6 stages
052. Which of the following elastic fibres are seen in periodontal ligament?
 (A) Elastin (B) Elaunin
 (C) Oxytalan (D) All of the above
053. Major salivary gland secretion contributes how much to the whole saliva:
 (A) 70%-80% (B) 60%-70%
 (C) 90%-95% (D) 50%-60%
054. All of the following are signs and symptoms of left heart failure except:
 (A) Cardiac enlargement (B) Orthopnoea
 (C) Pulmonary venous congestion (D) Dependent oedema
055. All of the following are true about Ewing's sarcoma except
 (A) Osseous malignant bone tumour (B) Males are affected more
 (C) Develops during puberty (D) Originates in bone marrow
056. Which tooth movement requires least amount of force
 (A) Rotation (B) Extrusion
 (C) Bodily movement (D) Intrusion
057. In vertical plane, the ratio of middle 3rd facial height to lower 3rd facial height is
 (A) 1:1 (B) 2:1
 (C) 1:2 (D) 1:1.5
058. Katz classification of malocclusion is based on
 (A) Incisor (B) Canine
 (C) Molar (D) Premolar

059. What does not occur during transition from deciduous to permanent dentition
- (A) Reduce arch circumference due to use of leeway space by molar
 (B) Increase interarch canine width
 (C) Slight labial placing of lower anteriors
 (D) Mesial drifting of premolar after primary canine exfoliation.
060. Which of the following greatest disadvantage of porcelain bracket:
- (A) Staining over time
 (B) Debonding difficult causing enamel micro-cracks
 (C) Require bonding agents
 (D) May cause allergy
061. Primary stability in micro-implant is by
- (A) Cortical bone (B) Flutes
 (C) Length of implant (D) Diameter
062. Which of the following is a soft tissue analysis of face
- (A) Down's analysis (B) Holdaway's analysis
 (C) Steiner's analysis (D) Tweed's analysis
063. Drug not used in H. pylori
- (A) Metronidazole (B) Omeprazole
 (C) Mosapride (D) Amoxicillin
064. Hepatitis-E virus causes
- (A) Acute liver failure (B) Chronic liver failure
 (C) Cirrhosis (D) Chronic renal failure
065. Glassgow coma scale is based on all except
- (A) Sensory loss (B) Motor response
 (C) Vocal response (D) Eye opening
066. Endocarditis is most commonly seen in:
- (A) Mitral Stenosis (B) Mitral Regurgitation
 (C) Tricuspid Stenosis (D) Pulmonary Stenosis
067. American Heart Association standard paediatric dose of amoxicillin for antibiotic prophylaxis, in cases of endocarditis is
- (A) 20 mg/kg (B) 50 mg/kg
 (C) 100 mg/kg (D) 125 mg/kg
068. Normal body mass index is between
- (A) 16.5-20.5 (B) 18.5-24.9
 (C) 25.0-29.9 (D) 30.0-39.9

069. A 29 years old woman with a pregnancy of 17 week has a 10 years old boy with Down syndrome. She does not want another down syndrome kid; the best advice to her is
- (A) No test is required now as her age is below 35 years
 (B) Ultrasound at this point of time will definitely tell her that next baby will be Down syndromic or not
 (C) Amniotic fluid samples plus chromosomal analysis will definitely tell her that next baby will be down syndromic or not
 (D) Blood screening at this point of time will clear the exact picture
070. The cyst that move by protruding tongue is
- (A) Thyroglossal cyst (B) Median rhomboid cyst
 (C) Ranula (D) Tracheal cyst
071. Wound that does not involve dermis
- (A) Abrasion (B) Contusion
 (C) Laceration (D) Incision
072. Commonest manifestation of carcinoma of nasopharynx
- (A) Nasal blockage (B) Epistaxis
 (C) Squint (D) Secondaries in neck
073. Bones of the cranial base include which of the following:
- (A) Maxilla, mandible and cranial vault (B) Ethmoid, sphenoid and occipital
 (C) Palatal, nasal and zygoma (D) Frontal and parietal
074. An adult patient with a class II molar relationship and a cephalometric ANB angle of 2 degrees has which type of malocclusion?
- (A) Class II dental malocclusion (B) Class II skeletal malocclusion
 (C) Class I dental malocclusion (D) Class I skeletal malocclusion
075. Class II elastics are used by stretching an elastic between which of the two following points?
- (A) From the posterior to the anterior within the maxillary arch
 (B) From the posterior to the anterior within the mandibular arch
 (C) From the posterior of the maxillary arch to the anterior of the mandibular arch
 (D) From the posterior of mandibular arch to the anterior of the maxillary arch
076. The 55th first ever virtual Indian Orthodontic conference was held in
- (A) Bhubaneshwar (B) Chandigarh
 (C) Amritsar (D) Jaipur
077. A 7-year-old has a 4mm maxillary midline diastema. Which of the following should be done?
- (A) Brackets should be placed to close it.
 (B) A radiograph should be taken to rule out the presence of a supernumerary tooth.
 (C) Nothing should be done. It will close on its own.
 (D) Nothing should be done. Treatment should be deferred until the rest of the permanent dentition erupts.
078. Congenitally missing teeth are result of failure in which stage of development?
- (A) Initiation (B) Morpho differentiation
 (C) Apposition (D) Calcification

079. Chemotherapeutic agent methotrexate belongs to
 (A) Alkylating agent (B) Antimetabolite
 (C) Natural product (D) None of the above
080. Why are photographs of bites necessary in forensic odontology?
 (A) Identify as human bite (B) Bite marks change over time
 (C) Swabbed for DNA (D) Pulp from centre of tooth
081. Adenoid facies is related to:
 (A) Sucking Pattern (B) Respiratory Pattern
 (C) Masticatory Pattern (D) Malocclusion Pattern
082. Pitch in implant dentistry refers to
 (A) Angulation of the thread (B) The depth of the thread
 (C) Width of the thread (D) Distance between the implant thread
083. The orifice of the parotid gland is located:
 (A) At the hamular notch
 (B) In proximity to the incisive papillae
 (C) On the buccal mucosa near the maxillary second molar
 (D) Slightly posterior to the mandibular central incisors
084. Muscle which pulls the disc of TMJ downwards:
 (A) Lateral pterygoid (B) Medial pterygoid
 (C) Digastric (D) Mylohyoid
085. Mental foramen is located:
 (A) Between roots of molars (B) Between incisors
 (C) Near canine (D) Between roots of premolars
086. Which of the following is located medial to the third molar at the junction of the maxilla and the horizontal plate of the palatine bone:
 (A) Posterior nasal spine (B) Greater palatine foramen
 (C) Pterygoid hamulus (D) Palatal midline suture
087. Two equal and opposite forces that are not collinear applied to a tooth are called which of the following?
 (A) The centre of resistance (B) The centre of rotation
 (C) Root movement (D) A Couple
088. All are branches of the posterior division of mandibular nerve except:
 (A) Inferior alveolar nerve (B) Mylohyoid nerve
 (C) Lingual nerve (D) Deep temporal nerve
089. Depression and protrusion of mandible is brought about by:
 (A) Lateral pterygoid muscle (B) Medial pterygoid muscle
 (C) Temporalis (D) Masseter
090. Tongue develops from all of the following except:
 (A) Arteroid swellings (B) Lingual swellings
 (C) Tuberculum impar (D) Hypobranchial eminence

091. Choose the correct hyper mineralized dentinal structure
 (A) Inter tubular dentin (B) Peritubular dentin
 (C) Interglobular dentin (D) Granular layer of Tomes
092. Muscle of mastication develops from:
 (A) 1st branchial arch (B) 2nd branchial arch
 (C) 3rd branchial arch (D) 6th branchial arch
093. Choose the correct nerve pharyngeal arch pair:
 (A) 1st arch - facial nerve (B) 3rd arch - glossopharyngeal arch
 (C) 4th arch - oculomotor nerve (D) 2nd arch - mandibular nerve
094. Vitamin D deficiency causes:
 (A) Bone mineralization (B) Increased 1.25 dihydroxy-cholecalciferol
 (C) Calcification of bone matrix (D) Defective calcification of bone matrix
095. Krebs's cycle does not occur in:
 (A) Heart (B) RBC
 (C) Muscle (D) All of the above
096. The daily requirement of protein for adults is:
 (A) 120 grams (B) 250 grams
 (C) 60 grams (D) 6 grams
097. An enzyme that makes a double stranded DNA copy from a single stranded RNA template molecule is known as:
 (A) Reverse transcriptase (B) RNA polymerase
 (C) DNA polymerase (D) Phosphokinase
098. The best technique for initial viral load estimation is:
 (A) Real time PCR (B) Immunofluorescence
 (C) Electrophoresis (D) Widal test
099. Arterial PO₂ is reduced in:
 (A) Anaemia (B) KCN poisoning
 (C) CO poisoning (D) Pulmonary hypoventilation
100. The kidney secretes all of the following hormones except:
 (A) Renin (B) 1, 2, 5 dihydroxy cholecalciferol
 (C) Vasopressin (D) Erythropoietin
101. Contractile element in myofibril is:
 (A) Sarcolemma (B) Sarcoplasm
 (C) Myofibril (D) Endomysium
102. The neuromuscular transmitter released at neuromuscular junction is:
 (A) Dopamine (B) Acetylcholine
 (C) Epinephrine (D) Nor epinephrine
103. Pain is conducted by:
 (A) A-Delta fibers (B) A-Alpha fibres
 (C) A-Gamma fibers (D) A-Beta fibers

104. Gag reflex is mediated by which cranial nerve:
 (A) VII (B) IX
 (C) X (D) XII
105. Delay in blood coagulation results from:
 (A) Human thrombin (B) Heparin
 (C) Vit-K (D) Ferric chloride
106. Activation of which one of the following coagulation factor is not essential for haemostasis:
 (A) XII (B) XI
 (C) IX (D) X
107. All of the following are adverse effects of long-term corticosteroids except:
 (A) Hypoglycaemia (B) Peptic ulcers
 (C) Increased orthodontic movement (D) Osteoporosis
108. Bone metabolism is controlled by:
 (A) Vit d & Calcium (B) Parathormone
 (C) Calcitonin (D) All of the above
109. Anaphylaxis should be treated first with:
 (A) Anti-histamines (B) Antibiotics
 (C) Epinephrine (D) Steroids
110. Hot air oven is used for sterilization of all except:
 (A) Glassware (B) Rubber tubes
 (C) Sharp instruments (D) Liquid paraffin
111. Rh incompatibility is which type of hypersensitivity reaction:
 (A) Type IV (B) Type III
 (C) Type II (D) Type I
112. Which of these is a high-level disinfectant
 (A) Povidine iodine (B) Glutaryldehyde
 (C) Alcohol (D) Phenol
113. Meckel's cartilage gives rise to:
 (A) Condylar process (B) Coronoid process
 (C) Rest of Ramus (D) None of the above
114. After age 6, increase in the size of mandible occurs at:
 (A) Along the lower border (B) Between canines
 (C) Symphysis (D) Distal to 1st molars
115. The original Straight Wire Appliance was based on the measurement of:
 (A) 120 orthodontic patients (B) 120 non orthodontic patients
 (C) 150 orthodontic patients (D) 100 non orthodontic patients
116. Negative growth is a characteristic of:
 (A) Testis (B) Brain
 (C) Mandible (D) Thymus

117. Father of Modern orthodontics is:
 (A) Martin Dewey (B) Edward H Angle
 (C) William Clark (D) Charles Tweed
118. The arch length preservation can best be carried out by:
 (A) Restoring a carious tooth
 (B) Placing a lingual arch
 (C) Placing band and loop space maintainer
 (D) Placing a acrylic removable space maintainer
119. 6 keys to ethical orthodontics was given by:
 (A) I. P. Zogakis (B) T.M Graber
 (C) William Clark (D) Indian orthodontic Society
120. Lingual multibracket technique of orthodontic appliance using the mushroom shaped arch wire in year 1967 was first developed by
 (A) Andrews (B) Craven Kurz
 (C) Kinja Fujita (D) Ricketts
121. Which of the following is a self-correcting anomaly
 (A) Ugly duckling stage (B) Deep bite
 (C) Protrusion (D) Retrusion
122. Late mesial shift is due to:
 (A) Closure of leeway space (B) Closure of primate space
 (C) Eruption of 1st permanent molar (D) Related to end on molar relation
123. According to Wolff's law:
 (A) Human teeth drift mesially as interproximal wear occurs
 (B) Pressure causes bone resorption
 (C) The optimal level of force to move teeth is 10 to 200 grams
 (D) Bone traberculae line up in response to mechanical stresses
124. Difference in width of permanent and and primary incisors is:
 (A) Incisal guidance (B) Incisal liability
 (C) Overjet (D) Incisal inclination
125. The ugly duckling stage is seen at the age of:
 (A) 10-12 (B) 6-7
 (C) 8-10 (D) 12-14
126. The cause of pseudo class III malocclusion is:
 (A) Developmental deficiency (B) Increased mandibular growth
 (C) Functional abnormality (D) Hormonal disturbance
127. Abnormally thick maxillary labial frenum results in:
 (A) Maxillary midline diastema (B) Imbrication of incisors
 (C) Labial inclination of incisors (D) Anterior deep bite

128. Tooth in the mandibular arch most likely to be displaced due to arch size discrepancy is:
 (A) First molar (B) Second molar
 (C) First premolar (D) Second premolar
129. Which of the following is true about Bio force arch wires:
 (A) The level of force applied is graded throughout the arch length according to the tooth size
 (B) It is manufactured by Welcare Orthodontics
 (C) They exert forces like orthopaedic appliances
 (D) Both (A) and (C) are correct
130. Soft tissue profile of a thumb sucking patient is:
 (A) Convex (B) Concave
 (C) Normal (D) Anterior divergent
131. In Ludwig's angina, the first step when patient report to emergency room
 (A) Incision and drainage under local anaesthesia
 (B) Tracheostomy under general anaesthesia
 (C) Tracheostomy under local anaesthesia
 (D) I/V antibiotics and fluid
132. What would be the treatment of choice for the adult class III skeletal malocclusion with prominent chin
 (A) Functional appliance (B) Fixed orthodontics
 (C) Functional jaw orthopaedic correction (D) Surgical Orthodontics
133. According to Graber, all of these are essential diagnostic Aids except:
 (A) Case history (B) Facial photograph
 (C) Periapical X-ray (D) Lateral cephalogram
134. Study models are used:
 (A) As a reference in orthodontic cases (B) To show shape, size and position of teeth
 (C) As an aid in treatment planning (D) All of the above
135. Fishman index is used for:
 (A) Skeletal growth maturity indicator (B) Dental growth maturity indicator
 (C) Arch length discrepancy (D) Prognathism measurement
136. Recommended concentration of fluoride in community water supply is
 (A) 0.1 ppm (B) 0.5 ppm
 (C) 1.0 ppm (D) 2.0 ppm
137. Cephalostat was developed by:
 (A) Holly Broadbent and Hofrath (B) Roentgen
 (C) Rutherford (D) Becquerel
138. Which of the following can be examined clinically
 (A) Frankfort horizontal plane (B) Bolton Plane
 (C) SN Plane (D) All of the above

139. The Y-axis is known as growth axis because:
(A) Its axis is parallel to patient's growth in height
 (B) It is an indicator of the direction of growth pattern
(C) It is an indicator of the amount of facial growth
(D) It increases in size as the growth increases
140. Which cephalometric point represents the centre of ramus of mandible
 (A) Xi-point (B) Pm point
(C) Ptm point (D) Gonion Point
141. The term Orthodontics was coined by:
 (A) Le Foulon of France (B) John Hunter
(C) Edward H Angle (D) Norman William Kingsley
142. Which malocclusion will not lead to straining of lips:
 (A) Class II Div 2 (B) Class I Div 1
(C) Bimaxillary protrusion (D) None of the above
143. Scissor bite is a term used to describe:
(A) Anterior posterior crowding with deep bite
(B) Posterior crossbite
 (C) The type of bite where maxillary segments contain full mandibular segments
(D) A type of anterior crossbite
144. Surgery of the cleft lip should be carried out at:
(A) 20-30 weeks (B) 2-12 months
 (C) 3-6 months (D) 5 years
145. Which of the following. Classification uses the "canine law" malocclusion in a sagittal direction:
(A) Dewey's classification (B) Simon's classification
(C) Bonnet's classification (D) Lischer's classification
146. Curve of occlusion touching the buccal and lingual surfaces of mandibular buccal cuspal teeth is a called as:
 (A) Curve of wilson (B) Curve of spee
(C) Curve of monsoon (D) Caterne curve
147. Function of space maintainers:
(A) Prevent supra eruption of opposite tooth
(B) Prevent migration of adjacent teeth
(C) Maintain space
 (D) All of the above
148. Which of the following is not a procedure of preventive orthodontics
(A) Topical fluoride application (B) Serial extraction
(C) Lip guard (D) Thumb sucking correction

162. Myofunctional appliance is given at which age
 (A) Primary dentition (B) Permanent dentition
 (C) Mixed dentition (D) Adulthood
163. The only tissue borne functional appliance is :
 (A) Twin block (B) Frankel
 (C) Activator (D) Bionator
164. Necrosis that occurs in tuberculosis is
 (A) Coagulative (B) Gangrenous
 (C) Caseous (D) Liquefactive
165. Oral vestibular screens are used for correction of:
 (A) Thumb sucking (B) Lip Biting
 (C) Tongue thrusting (D) Mouth breathing
166. Which of these is a fixed functional appliance
 (A) Twin block (B) Herbst appliance
 (C) Bionator (D) Anterior bite plate
167. In orthodontic movement, applied forces should not be more than the:
 (A) Masticatory forces (B) Systolic arterial blood pressure
 (C) Diastolic arterial blood pressure (D) Capillary blood pressure
168. Most frequently impacted permanent anterior teeth
 (A) Maxillary Central Incisor (B) Maxillary Cuspids
 (C) Mandibular cuspids (D) Lateral incisor
169. Midline diastema should be treated:
 (A) As early as possible (B) Only if protrusion of teeth is present
 (C) Only if lateral incisors are missing (D) After eruption of permanent canines
170. Posterior bite plates are used for:
 (A) Developing anterior crossbite (B) Correcting anterior crossbite
 (C) Developing posterior crossbite (D) Correcting posterior crossbite
171. Tooth movement most likely to relapse unless adequate retention is provided in:
 (A) Tipping (B) Extrusion
 (C) Rotation (D) Bodily movements
172. Prolonged retention is usually needed in:
 (A) Diastema (B) Mild crowding
 (C) Anterior crossbite (D) Deep bite
173. Relapse after orthodontic tooth movement is due to:
 (A) Supracrestal gingival fibers (B) Abnormal pressure habits
 (C) Improper angulation of the teeth (D) All of the above
174. Which of the following drug decreases the duration of orthodontic treatment?
 (A) Corticosteroids (B) Aspirin
 (C) Bisphosphonates (D) None of the above

175. Implants used in orthodontics are:
- (A) Transosseous implants (B) Endo-osseous implants
 (C) Bioresorbable implants (D) Micro-implants
176. Three months post implantation, the type of bone that can be found on the surface of a Titanium implant is
- (A) Mature bone (B) Mixture (woven and lamellar)
 (C) Complete lamellar (D) Immature woven bone
177. A balanced diet consists of:
- (A) 20% protein, 25% fats, 50% carbohydrates
 (B) 20% protein, 35% fats, 45% carbohydrates
 (C) 25% protein, 25% fats, 50% carbohydrates
 (D) 35% protein, 15% fats, 50% carbohydrates
178. Functional Matrix Theory is hypothesized by
- (A) Sicher (B) Scott
 (C) Melvin Moss (D) Petrovik
179. Growth of the face is completed in the following sequence:
- (A) Depth followed by Width and Height (B) Height followed by Width and height
 (C) No definite sequence (D) Width followed by Depth and Height
180. Torque in orthodontics refers to
- (A) Change in mesio distal inclination (B) Change in labiolingual inclination
 (C) Rotation (D) None of the above
181. Andrew's 5th key of occlusion
- (A) Class I molar relation (B) Curve of spee
 (C) Rotation absent (D) Tight contacts
182. The esthetic line of the dentition:
- (A) Is same as Angle's line of Occlusion
 (B) Cannot be well defined
 (C) Follows the buccal occlusal line of mandibular teeth
 (D) Follows the facial edges of maxillary anterior and posterior teeth
183. If the inference in Carey's analysis for space requirement is 3.5 mm, the method for space gain will be
- (A) Extraction of second premolar (B) Extraction of first premolar
 (C) Nothing should be done (D) Interproximal stripping
184. Choose the right option:
- (A) Mini Esthetics is the relationship of teeth to one another
 (B) Macro esthetics is the relationship of the dentition to the face
 (C) Both (A) and (B)
 (D) None of the above

185. Stiffness is highest in
(A) Stainless steel wire (B) Elgiloy wire
(C) TMA wire (D) Timolium wire
186. Wires displaying martensitic-austenitic transformations are referred to as:
(A) M NiTi (B) R NiTi
(C) A NiTi (D) Beta NiTi
187. For bonding to Porcelain which of the following is used:
(A) 9.6% hydrofluoric acid (B) 37% hydrofluoric acid
(C) 12.5% hydrofluoric acid (D) 20% hydrofluoric acid
188. Which of the cephalometric parameter is used to diagnose long face syndrome
(A) SNA (B) Saddle Angle
(C) Facial Angle (D) Jarabak Ratio
189. Memotain - A new CAD CAM fabricated lingual reainer is a wire made up of
(A) Copper Niti (B) Nickel Titanium
(C) Beta titanium (D) Stainless steel
190. Local anaesthetics act by innhibiting
(A) Sensory fibres (B) Motor fibres
(C) Both sensory and Motor fibres (D) None of the above
191. Root completion of permanent teeth is achieved after how many years of eruption.
(A) 4-5 (B) 3-4
(C) 2-3 (D) 1-2
192. Desmodent is a common term for:
(A) A tooth with wall defects (B) Dehiscence
(C) Periodontal ligament (D) Tooth anomaly
193. All are derivatives of Neural crest cells except
(A) Alveolar bone (B) Dentin
(C) Periodontal ligament (D) Enamel
194. Which of the following tissues have no reparative capacity
(A) Enamel (B) Dentin
(C) Cementum (D) Periodontal ligament
195. Scan Index is used as
(A) Malocclusion index (B) Treatment need index
(C) Treatment change index (D) Treatment of priority index
196. Value of ANB in skeletal class III
(A) -10 degree (B) +2 degree
(C) + 6 degree (D) 0 degree

