

Printed Pages: 15

Sr. No.....

WST-DCI-PGD-ORTHOD-2018-P-2-SET-1-A

Total Questions: 150

Max. Marks: 150

Time: Three Hours

Roll No. (in figures)
(in words).....

.....
(Signature of Candidate)

I have checked the entries made above and in the OMR Sheet by the candidate.

.....
(Signature of invigilator)

CANDIDATES MUST READ THE FOLLOWING INFORMATION/ INSTRUCTIONS BEFORE TO ATTEMPT THE QUESTION PAPER.

1. All the candidates must return the test booklet as well as answer-sheet to the Invigilator concerned before leaving the Examination Hall. If any candidate leaves the examination hall without handing over the test booklet/answer sheet to the Invigilator, a case of use of unfair means/ misbehavior will be registered against him/her in addition to lodging an FIR with the Police. The answer-sheet of such a candidate will not be evaluated.
2. The candidates must not do any rough work or writing work in the answer-sheet (OMR Sheet). All rough work is to be done in the test booklet.
3. Candidates will be required to darken the circle by using **blue/black ball point pen** only.
4. Books, papers, slide rule, log table, cellular phone, pager, calculator or any other electronic gadget etc. are not allowed in the Examination Hall.
5. **BEFORE ANSWERING THE QUESTIONS, THE CANDIDATES SHOULD ENSURE THAT THEY HAVE BEEN SUPPLIED THE CORRECT AND COMPLETE TEST BOOKLET CONTAINING SR. NO.1 TO 150 QUESTIONS, COMPLAINTS REGARDING MISPRINT ETC. WILL NOT BE ENTERTAINED 15 MINUTES AFTER THE EXAMINATION GETS STARTED.**

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1. Angle of convexity is :
A. SNA
C. N-A-Pog
B. SNB
D. ANB
2. Class III and pseudo class III malocclusion can be differentiated by :
A. Degree of cross bite
B. The presence of forward movement of the mandible in pseudo class III while closing
C. Molar relation and canine relationship
D. None of the above
3. Abnormal thick labial frenum results in :
A. Mid line diastema
C. Labial inclination of the incisors
B. Palatal inclination of the incisors
D. all of the above
4. The most anterior part of the bony chin is :
A. Gonion
C. Menton
B. Pogonion
D. Gnathion
5. Premature exfoliation of the primary canines indicates :
A. Arch length deficiency
C. Arch length excess
B. Skeletal malocclusion
D. None of the above
6. Maximum growth of skull is completed by the age of :
A. First 2 yrs
C. 6-7 yrs
B. 2-4 yrs
D. 9-10 yrs
7. Mid symphyseal suture closes by the age of :
A. 6 months
C. 30 months
B. 18 months
D. 5 years
8. The following dimension of the face at birth is close to the adult size :
A. Width
C. Height
B. Depth
D. All of the above
9. The teeth with development initiated after birth are :
A. Premolars, permanent second and third molars
B. Premolars and permanent molars
C. All permanent teeth
D. Only third molars
10. With flush-terminal plane, permanent first molars will erupt :
A. initially in class I relationship
C. initially in end-to-end relationship
B. initially in class II relationship
D. initially in class III relationship
11. The growth of bone is of endochondral type in the following except:
A. Ethmoid bone
C. Zygoma
B. Hyoid
D. Stapes

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12. True about Leeway Space of Nancy is :
A. The amount of leeway space is about 2.5 mm in maxillary arch
B. The amount of leeway space is about 5.6 mm in mandibular arch
C. Both A&B are correct
D. Both A&B are incorrect
13. Ugly duckling stage:
A. Is seen in maxillary central incisor region between 12-13 years of age
B. Condition is seen during eruption of permanent canines
C. Type of malocclusion is not seen in lower arch
D. Path of eruption of mandibular canine is different from that of maxillary canines
14. Mandibular second premolar:
A. Is the tooth that shows greatest variation in eruption timing
B. Shows greatest variation in occlusal form next to maxillary IInd molar
C. Is the only premolar tooth that shows 3 cusps more frequently
D. Is the tooth in the mandibular arch that is most likely to be displaced due to arch size discrepancy
15. Following are " essential diagnostic criteria" according to Graber except:
A. Case history
B. Fascial photographs
C. Periapical X-rays
D. Lateral cephalograms
16. Frankfort horizontal plane is formed by joining:
A. Porion and Orbitale
B. Porion and sella
C. Nasion and sella
D. Porion and nasion
17. An 11 year old boy complains of spacing between maxillary incisors, the appropriate treatment is with:
A. Hawley's appliance
B. Fixed appliance
C. No treatment
D. Oral screen
18. Frankle -IV is used for:
A. Class -I malocclusion
B. Class -II malocclusion
C. Class -III malocclusion
D. Bimaxillary protrusion
19. Triangular roots are all except:
A. Canines
B. Maxillary centrals
C. Maxillary laterals
D. Mandibular molars
20. Father of modern orthodontics is :
A. Anderson
B. Dewey
C. Edward H-angle
D. Lischer

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21. The Cu-NiTi wire indicated in patients sensitive to pain is :
A. Type 1
B. Type 2
C. Type 3
D. Type 4
22. According to Ricketts and Engel(1979) commonly found arch forms are all except :
A. Normal
B. Ellipse
C. Tapered
D. Ovoid
23. In mushroom shaped archwire given by Fujita molar offset given is :
A. 1 mm
B. 2 mm
C. 3 mm
D. 4 mm
24. Force decay seen in natural elastic within first hour of use is :
A. 10%
B. 15%
C. 30%
D. 50%
25. For uprighting a canine with mesially inclined root, box loop is placed such that :
A. Mesial arm is kept short
B. Distal arm is kept short
C. Occlusal arm is kept short
D. All arms are kept equal
26. The drawbacks of Kesling tooth positioned include :
A. Requirement of repeated adjustment at frequent intervals
B. Difficulty in speech and risk of TMJ problems
C. Weakening of the periodontal condition of teeth
D. None of the above
27. Adjunctive orthodontic treatment means :
A. Tooth movement carried out to facilitate other dental procedures necessary to control disease and restore function
B. Orthodontic treatment which would take more than six months duration
C. Orthodontic surgical procedures carried out along with orthodontic therapy to correct dentofacial deformities
D. None of the above
28. To align the favourably impacted canine in the arch, the orthodontists should :
A. Extract the canine and then transplant it in the proper alignment
B. Remove the overlying soft tissue and bony tissue and try to pull the canine with the help of elastics applied directly to crown
C. Remove the overlying soft tissue and retract it into proper alignment with the help of removable appliance with canine retractor
D. Remove the overlying soft tissue and bony tissue and directly bond the crown of impacted canine, winding the ligature wire around the attachment, the other end of which is tied to the removable or fixed orthodontic appliance
29. The role of maxillary obturator as an intra-oral prosthetic device in a cleft palate patient is :
A. To provide a false roofing against which the child can suckle
B. To provide cross arch stability preventing the arch from collapsing
C. Both of the above
D. None of the above

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30. Which of the following statement about the midline diastema **IS CORRECT**?
- A. Midline diastema is easy to correct and easy to retain
 - B. Midline diastema is easy to correct and difficult to retain
 - C. Midline diastema is difficult to correct and easy to retain
 - D. Midline diastema is difficult to correct and difficult to retain
31. Most commonly used appliance for the treatment of deep bite is :
- A. Removable Hawley's appliance with posterior bite plane
 - B. Removable Hawley's appliance with anterior bite plane
 - C. Removable Hawley's appliance with anterior and posterior bite plane
 - D. None of the above
32. Skeletal anterior cross bite due to retropositioned maxilla should be treated :
- A. Before termination of growth by using a protraction face mask
 - B. After termination of growth by using a protraction face mask
 - C. Before termination of growth by using head gear
 - D. After termination of growth by using head gear
33. Cephalometric examination of a patient having skeletal anterior open bite may reveal:
- A. Downward and forward rotation of the mandible
 - B. Upward rotation of the mandible
 - C. Upward and forward rotation of the mandible
 - D. Upward and backward rotation of the mandible
34. A patient of 22years of age with severe maxillary deficiency and mandibular prognathism should be best treated by :
- A. Extraction of first premolar from both the upper and lower arches
 - B. Using high pull head gear and chin cup
 - C. Surgical maxillary advancement and mandibular set back
 - D. Fixed orthodontic therapy only
35. Which of the following is the least likely to influence the anteroposterior position of maxillary incisors?
- A. Size of the apical base
 - B. Tongue buccinator mechanism
 - C. Being a concert clarinetist
 - D. Congenital absence of third molars
36. A radiograph of a 4year old child reveals no evidence of calcification of mandibular second premolars. This means that :
- A. These teeth may develop later
 - B. The child will probably never develop second premolars
 - C. Primary second molars should be extracted to allow permanent first molars to drift forward
 - D. It is too early in life to make final predictions concerning development of any permanent teeth
37. A patient came to the dentist with skeletal class III tendency and giving a history of cleft palate for which he had been operated at 3 years of age. For the correction of maxillary deficiency the dentist uses which of the following orthopaedic appliances?
- A. Head gear
 - B. Face bow with head gear
 - C. A reverse pull head gear
 - D. All of the above

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38. Growth of the maxilla in the vertical direction is due to :
A. Growth of the alveolus
B. Growth at sutures
C. Growth of the cranial base
D. Growth of the synchondrosis
39. The implant method of studying growth was proposed by :
A. Scammon
B. Borg
C. Belchier
D. Bjork
40. Oral and nasal capsule of functional growth is related to :
A. Periosteal matrix
B. Sutural matrix
C. Capsular matrix
D. None of the above
41. Late mesial shift is due to :
A. Closure of primate spaces
B. Eruption of first permanent molars
C. Related to end on – molar relation
D. Closure of Lee way space
42. Leeway space is :
A. 1.7 mm and greater in mandible
B. 1.7 mm and least in mandible
C. 3.4 mm and greater in mandible
D. 3.4 mm and least in mandible
43. Spaces in deciduous dentition is :
A. Physiological
B. Pathological
C. Incisal liability
D. None of above
44. Mesial step formation in deciduous dentition is indication of future :
A. Class II malocclusion
B. Class III malocclusion
C. Anterior crowding
D. Anterior cross bite
45. Incisal liability on an average in the maxillary arch is :
A. 3mm
B. 6mm
C. 4mm
D. 7.5mm
46. Tooth in the mandibular arch which is most likely to be displaced due to arch size discrepancy is?
A. First molar
B. Second molar
C. First premolar
D. Second premolar
47. Mouth breathing with enlarged adenoids and tonsils may be best described as :
A. Anatomic
B. Obstructive
C. Physiologic
D. Habitual
48. The abnormal swallowing pattern with the POOREST prognosis is :
A. Simple tongue thrust
B. Complex tongue thrust
C. Infantile swallow
D. Retained infantile swallow

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49. A malocclusion is characterized by protrusion of maxilla, labioversion of maxillary incisors, deep overbite and overjet. These are typical characteristic of which malocclusion?
A. Class I
B. Class II Div 1
C. Class II Div 2
D. Class III
50. Bruxism bears which one of the following relationships to malocclusion?
A. Malocclusion is only cause of bruxism
B. Malocclusion may be the cause of bruxism
C. Correction of occlusal discrepancy always eliminate bruxism
D. None of above
51. Abnormal muscle activity results in :
A. Bruxism
B. Nail biting
C. Tongue thrusting
D. Thumb sucking
52. Cephalometric was introduced by :
A. Margolis and William Wilson in 1925
B. Tweed and Mills in 1940
C. Bjork and Sassouni in 1995
D. Broadbent and Hofrath in 1932
53. Which of the following CANNOT BE assessed with cephalometric radiograph?
A. Mandibular retrusion
B. Vertical facial disproportion
C. Incisor position & angulation
D. Adequacy of dental arch perimeter
54. Tweed's triangle denotes :
A. The position of maxilla and mandible to each other
B. The angle between the mandibular plane and mandibular incisors
C. Relationship between maxillary central and mandibular central incisor
D. Profile of an individual
55. Which of the following landmarks is present in the angle of mandible?
A. Gnathion
B. Gonion
C. Pogonion
D. Porion
56. The human temporomandibular joint function as a lever :
A. Class I
B. Class II
C. Class III
D. All of the above
57. Baume type II classification of primary dentition is characterized by :
A. Closed contacts between the teeth
B. Open contacts between the teeth
C. Proclined teeth
D. Retroclined teeth
58. The concept of "accelerated facemask therapy" was put forwarded by :
A. Hickham
B. Petit
C. Grummon
D. Delaire

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59. Alteration in root shape before and after orthodontic treatment using radiographic modality was first proposed by:
A. Ketcham
C. Kaley and Phillips
B. Newman and Proffit
D. Malmgren and Lavender
60. In diagnostically driven robotic assisted orthodontics (DDRA) technology (e.g. suresmile) robots can bend the arch wire with an angular and linear accuracy of:
A. 1degree and 0.01mm
C. 1degree and 0.1mm
B. 0.1degree and 0.01mm
D. 2degree and 1mm
61. Extraoral elastics are anchored from facebow to headgear or from maxillary splint to facemask to apply heavy force. The light or training extraoral elastic used to apply force of :
A. 8 OZ
C. 14 OZ
B. 12 OZ
D. 16 OZ
62. Many procedures are used to accelerate the orthodontic treatment time. Among these which does not accelerate the orthodontic tooth movement :
A. PTH
C. MOP
B. Osteoprotegerin
D. Corticotomy
63. In general upto how many millimetres of overjet can be corrected by dentofacial orthopaedics appliances in growing children?
A. 0 to7 mm
C. 12 to 15mm
B. 5 to 7mm
D. 15to 18mm
64. Katz classification of malocclusion is based on :
A. Canine relation
C. Molar relation
B. Premolar relation
D. Incisor relation
65. Which of the following is not a 3-D printing technology based manufacturing process?
A. Selective laser sintering
C. Fused deposition modelling
B. Rapid protoisolation
D. Polyjet photopolymerization
66. According to Moyers, development is :
A. Growth+ differentiation
C. Differentiation + translation
B. Growth+ differentiation + translation
D. Growth+ differentiation + transcription
67. Use of CBCT in orthodontics is recommended in all of the following except :
A. Impacted teeth
C. Orthognathic surgery
B. Facial asymmetry
D. Class II malocclusion
68. As far as etching pattern of enamel surface of tooth is concerned, which of the following etch pattern of enamel surface is/ are preferred?
A. Type I
C. Type III
B. Type II
D. Type I and II
69. All of the following are commercially available Co-Cr alloy for orthodontic archwire except :
A. Elgiloy
C. Multiphase
B. Azura
D. Dual flex

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70. The relationship in change of position of upper lip and linear retraction of maxillary incisor is usually :
A. 1:1
B. 1:2
C. 1:3
D. 1:4
71. Sunday bite is most commonly seen in :
A. Class II division 1 malocclusion
B. Class II division 2 malocclusion
C. Class I type 2 malocclusion
D. Class I type 3 malocclusion
72. Which of the following is not a sagittal dysplasia indicator?
A. Beta angle
B. W angle
C. Yen angle
D. Omega angle
73. Cephalogram of a patient showing beta angle <27 degree, it indicates :
A. Class I malocclusion
B. Class II malocclusion
C. Class III malocclusion
D. Open bite
74. Steiner's compromise is indicated for the camouflage treatment of :
A. Class I malocclusion
B. Class II malocclusion
C. Periodontal compromise cases
D. Open bite cases
75. Growth treatment response vector (GTRV) was given by :
A. Liou and Huwang
B. Nanda
C. Sugawara
D. Ngan
76. Steiner's mandibular plane is formed by joining following points :
A. Go- point D
B. Go-Pog
C. Go-Me
D. Go-Gn
77. Blue grass appliance was given by :
A. Grass B
B. Haskell
C. Chug Haw Kaw
D. George Faber
78. Characteristic feature of binder's syndrome is :
A. Maxillonasal dysplasia
B. Class II malocclusion
C. Scissor bite
D. Open bite
79. Hybrid functional appliance is used to address :
A. Sagittal component of asymmetry
B. Transverse component of asymmetry
C. Vertical component of asymmetry
D. Both transverse and vertical component
80. In cleft lip palate cases in infant orthodontics treatment should be started at the age of :
A. 3 - 6 week
B. 1 - 2 week
C. After 6 week
D. Just before surgery
81. For rapid canine retraction using PDL distraction, canine is distalize at the rate of :
A. 0.5 mm /day
B. 1 mm/day
C. 1.5mm/day
D. 0.25 mm/day

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82. Trans-palatal arch (TPA) is :
A. Minimum anchorage device
B. Moderate anchorage device
C. Maximum anchorage device
D. It does not provide anchorage control
83. Which of the following index is not used to assess outcome in cleft patients?
A. GOSLON yardstick
B. EUROCRAN index
C. Oslo index
D. Huddart Bodenham system
84. Tip edge bracket is developed by:
A. Robert Ricketts
B. Wick Alexander
C. Jaraback
D. Peter Kesling
85. From a clinical viewpoint, the major purpose of heating stainless steel archwire is :
A. To increase the elastic limit
B. To minimize breakage
C. To increase the resilience
D. To increase the yield strength
86. Who suggested the protocol of repetitive weekly alternate rapid maxillary expansion and constriction of the maxilla to disarticulate the maxilla for protraction?
A. Eric Liou
B. Peter Ngan
C. T Baccetti
D. V Delaire
87. Simultaneous use of class II elastics is recommended during labial torqueing of upper incisors to prevent :
A. Roller coaster effect
B. Row boat effect
C. Bauschinger effect
D. Wagon wheel effect
88. Which of the following patients undergoing orthodontic treatment have an increased incidence of root resorption?
A. Uncontrolled diabetes
B. Asthma
C. Epilepsy
D. Rheumatoid arthritis
89. The concept of driftodontics was popularized by :
A. William Wilcko
B. Ronald Roth
C. Wick Alexander
D. Howard Lang
90. Which of the following copper NiTi variant would provide activation only after consuming hot food and beverages?
A. 15°C
B. 27°C
C. 35°C
D. 40°C
91. While using ICON index to assess treatment need, treatment is indicated if the summary score is :
A. 43
B. 36-40
C. 31-35
D. < 31
92. The optimal time to treat a child with Frankel's functional regulator is when the child is in:
A. Deciduous dentition
B. Early mixed dentition
C. Late mixed dentition
D. Permanent dentition

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93. Which of the following is suitable condition for interproximal stripping :
A. Triangular incisors
B. Round premolars
C. Microdontic teeth
D. Screw driver shaped teeth
94. During development of foetus, the communication between the foregut and stomodeum is established at the end of :
A. Ninth week
B. Third week
C. Seventh week
D. Fifth week
95. According to Holdaway, the ratio of the distance of the lower incisors in front of the NB line and the distance of the bony chin in front of the NB line should be :
A. 1:1
B. 1:1.5
C. 1:2
D. 2:1
96. Masticatory performance of class III patients improve after orthognathic surgery; however, it takes upto _____ years to confirm a significant improvement in masticatory performance :
A. 3
B. 5
C. 7
D. 9
97. Which of the following is the most important reason for seeking orthodontic treatment?
A. To enhance dental appearance
B. To enhance facial appearance
C. To improve dental health
D. To enhance self-confidence
98. The recommended treatment cut off point of "dental aesthetic index" (developed by Cons et al, 1986) is :
A. 20
B. 25
C. 31
D. 36
99. The functional type of crossbite in which the midlines are centred in rest position but midline shift occurs in full occlusion, is called :
A. Laterocclusion
B. Laterognathy
C. Lateral occlusion
D. Lateroversion
100. Every millimetre of trans-palatal width increase in the premolar region produces a mm increase in available maxillary arch perimeter :
A. 0.5
B. 0.6
C. 0.7
D. 0.9
101. Following has abnormal lateral path of closure except :
A. Narrow maxilla
B. Class II div2
C. Class III
D. Class II div 1
102. "Obliteration Index" was developed by to quantify the percentage of ossification in the mid palatal suture :
A. Person etal
B. Bishara etal
C. Mc Namara etal
D. Issacson etal

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103. Who was first to describe a technique of surgically assisted rapid maxillary expansion with mid-palatal splitting?
A. Brown
C. Hass
B. Angell
D. Heiss
104. "Guidance theory" for palatally placed or impacted maxillary canine was proposed by:
A. Miller and Bass
C. Lappin
B. Hitching
D. Broadbent
105. In "Index of Orthodontic Treatment Need" (IOTN) patient is placed between how many grades?
A. 3
C. 5
B. 4
D. 6
106. Idiopathic condylar resorption (ICR) is a relatively rare condition involving mainly female adolescents. In such a condition which of the following group/ category of malocclusion is usually seen?
A. Class I
C. Class III
B. Class II
D. Any one of the above
107. Hook's law is not applicable for which of the following orthodontic wire?
A. NiTi
C. TMA
B. A-NiTi
D. Stainless steel
108. The force decay rate of orthodontic polyurethane chain elastics is to the oral Ph :
A. Inversely proportional
C. Partially related
B. Directly proportional
D. Cannot predicted easily
109. The GOSLON (Great Ormond Street, London) Yardstick was developed as a clinical tool that categorized dental arch relationships into.....discrete categories :
A. 3
C. 5
B. 4
D. 6
110. In multifactorial inheritance, the likeness of parents and offsprings can be expressed by:
A. Standard error
C. Correlation coefficient
B. Degree of freedom
D. All of the above
111. Correlation between the age and weight of a child is best represented by :
A. Line diagram
C. Histogram
B. Bar diagram
D. Pi chart
112. The shape of "occlusal force curve" is similar to the positive half of which of the following curve?
A. Sine
C. Tangent
B. Cosine
D. Combination of above

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113. Who among the following was first to propagate the long term retention using banded retainers?
A. Zachrison
B. Peck
C. Sheridan
D. Hagg
114. Which of the following is a sagittal dysplasia indicator?
A. ZEN angle
B. YEN angle
C. MEN angle
D. TEN angle
115. Lateral Cephalogram of a patient showing Beta angle >35 degree, which is suggestive of
A. Class I malocclusion
B. Class II malocclusion
C. Class III malocclusion
D. Open bite
116. Lateral Cephalogram of a patient showing W- angle <51 degree, which is suggestive of:
A. Class I malocclusion
B. Class II malocclusion
C. Class III malocclusion
D. Open bite
117. Concept of rapid canine retraction through distraction of the periodontal ligament was given by :
A. Liou and Huwang
B. Nanda
C. Sugawara
D. Ngan
118. Commonest transposition in mandibular arch is between :
A. Canine and first premolar
B. Canine and lateral incisor
C. Lateral and central incisor
D. Canine and central incisor
119. STb lingual bracket was developed by :
A. Craven Karz
B. Giuseppe Scuzzo and Kyoto Takemoto
C. Silvia Geron and Kyoto Takemoto
D. Dirk Weichmann
120. Use of CBCT in orthodontics is recommended in all of the following except -
A. Impacted teeth
B. Facial asymmetry
C. Orthognathic surgery
D. Class III malocclusion
121. All of the following can be used to enhance the anchorage except :
A. Osteoprotegerin
B. RANKL
C. Bisphosphonate
D. Chromosomal Arch
122. Which of the following is not the Synostosis syndrome?
A. Treacher Collin syndrome
B. Apert syndrome
C. Calvin CasePfeiffer syndrome
D. Crouzon syndrome
123. Most commonly used file formats for 3-D printing is :
A. STL file
B. DICOM file
C. STM file
D. SLS file

124. Which one is not a lingual laboratory procedure?
A. TARG
B. CLASS
C. HORA system
D. Ray Set Biaggini bracket positioner
125. Which of the following factors is not contributing to lip projection?
A. Lip thickness
B. Dental protrusion/retrusion
C. Maxillomandibular protrusion/retrusion
D. Lip length
126. Microesthetics includes all except :
A. Width relationships and golden proportion
B. Height width relationship
C. Amount of incisor and gingival display
D. Gingival height shape and contour
127. According to Burden DJ with how much overjet incidence of coronal fracture is doubled?
A. 2 mm
B. 3 mm
C. 4 mm
D. 6 mm
128. The British incisor classification was modified in 1992 by ?
A. Ballard and wayman
B. Ackerman and Proffit
C. Williams and Stephens
D. Katz
129. Which of the following is involved in fluid dynamic theory of orthodontic tooth movement?
A. Squeeze film effect
B. Halo effect
C. Roller coaster effect
D. Cart wheel effect
130. The syndrome involving bicoronal synostosis defect and characterized by proptosis, hypertelorism, down slanting palpebral fissures, broad and medially deviated thumbs is:
A. Apert syndrome
B. Crouzon syndrome
C. Pfeifer syndrome
D. Muenke's syndrome
131. Signs of vertical growth rotation includes all except :
A. Long ramus
B. Prominent antegonial notch
C. Large gonial angle
D. Anterior inclination of condylar head
132. Which of the following is Indian innovation in the form of Cephalometric analysis and superimposition tool/
A. SmileCeph
B. QuickCeph
C. AutoCeph
D. A O Ceph
133. I point and I curve superimposition was proposed by :
A. Johnston et al
B. Standerwick et al
C. Richardson
D. McNamara

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134. Which tool is used to locate musculoskeletally stable position of TMJ?
A. Leaf gauge
B. Korex gauge
C. Dontrix gauge
D. Boons gauge
135. While evaluating range of mandibular movements, lateral movement below which restricted movement is recorded is?
A. 6 mm
B. 8 mm
C. 10 mm
D. 12 mm
136. According to Burstone material stiffness number of Nitinol (when stainless steel is taken as 1.00) is :
A. 0.26
B. 0.34
C. 0.42
D. 0.50
137. The first self ligating system introduced was :
A. Ormco Edgelock
B. Russel lock
C. Orec speed
D. Adenta Time
138. Anatomic portion to the artistic portion of orthodontic study :
A. 3:1
B. 1:3
C. 2:1
D. 1:1
139. The success of SABG based on height of the interdental septum evaluated using :
A. Epworth scale
B. Goslon index
C. Bergland index
D. VAS
140. Corticotomy is not indicated in :
A. Severe crowding
B. Bimaxillary protrusion with a gummy smile
C. Maxillary transverse deficiency
D. Patient requiring high anchorage control
141. Class II elastics simultaneously used with upper incisor torquing is to prevent :
A. Bauschinger effect
B. Wagon wheel effect
C. Rollercoaster effect
D. Row boat effect
142. Energy absorbed by ionizing radiation per unit mass of is called :
A. Absorbed dose
B. Equivalent dose
C. Effective dose
D. Radiation dose
143. GTRV ratio for individual with normal growth pattern from age 8 to 16 years :
A. 0.47
B. 0.52
C. 0.77
D. 0.82
144. Usual site of failure during orthodontic debonding?
A. Adhesive and enamel surface
B. Between the adhesive and the bracket
C. Within the adhesive itself
D. Cannot be predicted

WST-DCI-PGD-ORTHOD-2018-P-2-SET-1-A

145. Head position for a cephalometric radiograph :
A. Natural head position
B. Positioned with ear rods
C. Mandibular plane parallel to floor
D. Cranial base parallel to floor
146. Cut off point for dental esthetic index :
A. 31
B. 20
C. 53
D. 43
147. The ratio of skeletal to dental expansion obtained by rapid palatal expansion :
A. 1:1
B. 2:1
C. 3:1
D. 4:1
148. Palatal fistula is operated if the size is more than :
A. 2mm
B. 3mm
C. 5mm
D. 10mm
149. For etching porcelain surfaces 9.6% HF gel is applied for :
A. 30 sec
B. 1 min
C. 2 min
D. 3 min
150. Jumping of bite concept was introduced by :
A. Anderson
B. Kingsley
C. Farrar
D. Emerson C Angell

KEY OF DCI-PGD-ORTHOD-2018-P-2-SET-1A

1	C	41	D	81	A	121	B
2	B	42	C	82	B	122	A
3	A	43	A	83	C	123	A
4	B	44	B	84	D	124	C
5	A	45	D	85	B	125	D
6	C	46	B	86	A	126	C
7	B	47	B	87	B	127	B
8	A	48	D	88	B	128	C
9	A	49	B	89	C	129	A
10	C	50	B	90	D	130	C
11	C	51	C	91	A	131	A
12	D	52	D	92	B	132	C
13	A	53	D	93	A	133	B
14	B	54	B	94	B	134	A
15	D	55	B	95	A	135	B
16	A	56	C	96	B	136	A
17	C	57	A	97	A	137	B
18	D	58	B	98	C	138	A
19	D	59	A	99	A	139	C
20	C	60	C	100	C	140	B
21	B	61	A	101	D	141	D
22	B	62	B	102	A	142	A
23	C	63	C	103	A	143	C
24	A	64	B	104	A	144	B
25	C	65	B	105	C	145	A
26	B	66	B	106	B	146	A
27	A	67	D	107	B	147	A
28	D	68	D	108	A	148	A
29	C	69	D	109	C	149	C
30	B	70	C	110	C	150	B
31	B	71	A	111	A		
32	A	72	D	112	A		
33	A	73	B	113	A		
34	C	74	B	114	B		
35	D	75	D	115	C		
36	A	76	D	116	B		
37	C	77	B	117	A		
38	A	78	A	118	B		
39	D	79	C	119	A		
40	C	80	A	120	D		

Printed Pages: 15

Sr. No.....

WST-DCI-PGD-ORTHOD-2018-P-2-SET-1-B

Total Questions: 150

Max. Marks: 150

Time: Three Hours

Roll No. (in figures)

(in words).....

.....
(Signature of Candidate)

I have checked the entries made above and in the OMR Sheet by the candidate.

.....
(Signature of invigilator)

CANDIDATES MUST READ THE FOLLOWING INFORMATION/ INSTRUCTIONS BEFORE TO ATTEMPT THE QUESTION PAPER.

1. All the candidates must return the test booklet as well as answer-sheet to the Invigilator concerned before leaving the Examination Hall. If any candidate leaves the examination hall without handing over the test booklet/answer sheet to the Invigilator, a case of use of unfair means/ misbehavior will be registered against him/her in addition to lodging an FIR with the Police. The answer-sheet of such a candidate will not be evaluated.
2. The candidates must not do any rough work or writing work in the answer-sheet (OMR Sheet). All rough work is to be done in the test booklet.
3. Candidates will be required to darken the circle by using **blue/black ball point pen** only.
4. Books, papers, slide rule, log table, cellular phone, pager, calculator or any other electronic gadget etc. are not allowed in the Examination Hall.
5. **BEFORE ANSWERING THE QUESTIONS, THE CANDIDATES SHOULD ENSURE THAT THEY HAVE BEEN SUPPLIED THE CORRECT AND COMPLETE TEST BOOKLET CONTAINING SR. NO.1 TO 150 QUESTIONS, COMPLAINTS REGARDING MISPRINT ETC. WILL NOT BE ENTERTAINED 15 MINUTES AFTER THE EXAMINATION GETS STARTED.**

WST-DCI-PGD-ORTHOD-2018-P-2-SET-1-B

1. Late mesial shift is due to :
A. Closure of primate spaces
B. Eruption of first permanent molars
C. Related to end on – molar relation
D. Closure of Lee way space
2. Leeway space is :
A. 1.7 mm and greater in mandible
B. 1.7 mm and least in mandible
C. 3.4 mm and greater in mandible
D. 3.4 mm and least in mandible
3. Spaces in deciduous dentition is :
A. Physiological
B. Pathological
C. Incisal liability
D. None of above
4. Mesial step formation in deciduous dentition is indication of future :
A. Class II malocclusion
B. Class III malocclusion
C. Anterior crowding
D. Anterior cross bite
5. Incisal liability on an average in the maxillary arch is :
A. 3mm
B. 6mm
C. 4mm
D. 7.5mm
6. Tooth in the mandibular arch which is most likely to be displaced due to arch size discrepancy is?
A. First molar
B. Second molar
C. First premolar
D. Second premolar
7. Mouth breathing with enlarged adenoids and tonsils may be best described as :
A. Anatomic
B. Obstructive
C. Physiologic
D. Habitual
8. The abnormal swallowing pattern with the POOREST prognosis is :
A. Simple tongue thrust
B. Complex tongue thrust
C. Infantile swallow
D. Retained infantile swallow
9. A malocclusion is characterized by protrusion of maxilla, labioversion of maxillary incisors, deep overbite and overjet. These are typical characteristic of which malocclusion?
A. Class I
B. Class II Div 1
C. Class II Div 2
D. Class III
10. Bruxism bears which one of the following relationships to malocclusion?
A. Malocclusion is only cause of bruxism
B. Malocclusion may be the cause of bruxism
C. Correction of occlusal discrepancy always eliminate bruxism
D. None of above
11. Abnormal muscle activity results in :
A. Bruxism
B. Nail biting
C. Tongue thrusting
D. Thumb sucking

WST-DCI-PGD-ORTHOD-2018-P-2-SET-1-B

12. Cephalometric was introduced by :
A. Margolis and William Wilson in 1925 B. Tweed and Mills in 1940
C. Bjork and Sassouni in 1995 D. Broadbent and Hofrath in 1932
13. Which of the following CANNOT BE assessed with cephalometric radiograph?
A. Mandibular retrusion B. Vertical facial disproportion
C. Incisor position & angulation D. Adequacy of dental arch perimeter
14. Tweed's triangle denotes :
A. The position of maxilla and mandible to each other
B. The angle between the mandibular plane and mandibular incisors
C. Relationship between maxillary central and mandibular central incisor
D. Profile of an individual
15. Which of the following landmarks is present in the angle of mandible?
A. Gnathion B. Gonion
C. Pogonion D. Porion
16. The human temporomandibular joint function as a lever :
A. Class I B. Class II
C. Class III D. All of the above
17. Baume type II classification of primary dentition is characterized by :
A. Closed contacts between the teeth B. Open contacts between the teeth
C. Proclined teeth D. Retroclined teeth
18. The concept of "accelerated facemask therapy" was put forwarded by :
A. Hickham B. Petit
C. Grummon D. Delaire
19. Alteration in root shape before and after orthodontic treatment using radiographic modality was first proposed by:
A. Ketcham B. Newman and Proffit
C. Kaley and Phillips D. Malmgren and Lavender
20. In diagnostically driven robotic assisted orthodontics (DDRA) technology (e.g. suresmile) robots can bend the arch wire with an angular and linear accuracy of:
A. 1degree and 0.01mm B. 0.1degree and 0.01mm
C. 1degree and 0.1mm D. 2degree and 1mm
21. Extraoral elastics are anchored from facebow to headgear or from maxillary splint to facemask to apply heavy force. The light or training extraoral elastic used to apply force of :
A. 8 OZ B. 12 OZ
C. 14 OZ D. 16 OZ
22. Many procedures are used to accelerate the orthodontic treatment time. Among these which does not accelerate the orthodontic tooth movement :

WST-DCI-PGD-ORTHOD-2018-P-2-SET-1-B

- A. PTH
C. MOP
- B. Osteoprotegerin
D. Corticotomy
23. In general upto how many millimetres of overjet can be corrected by dentofacial orthopaedics appliances in growing children?
A. 0 to 7 mm
C. 12 to 15mm
B. 5 to 7mm
D. 15 to 18mm
24. Katz classification of malocclusion is based on :
A. Canine relation
C. Molar relation
B. Premolar relation
D. Incisor relation
25. Which of the following is not a 3-D printing technology based manufacturing process?
A. Selective laser sintering
C. Fused deposition modelling
B. Rapid prototyping
D. Polyjet photopolymerization
26. According to Moyers, development is :
A. Growth+ differentiation
C. Differentiation + translation
B. Growth+ differentiation + translation
D. Growth+ differentiation + transcription
27. Use of CBCT in orthodontics is recommended in all of the following except :
A. Impacted teeth
C. Orthognathic surgery
B. Facial asymmetry
D. Class II malocclusion
28. As far as etching pattern of enamel surface of tooth is concerned, which of the following etch pattern of enamel surface is/ are preferred?
A. Type I
C. Type III
B. Type II
D. Type I and II
29. All of the following are commercially available Co-Cr alloy for orthodontic archwire except :
A. Elgiloy
C. Multiphase
B. Azura
D. Dual flex
30. The relationship in change of position of upper lip and linear retraction of maxillary incisor is usually :
A. 1:1
C. 1:3
B. 1:2
D. 1:4
31. Sunday bite is most commonly seen in :
A. Class II division 1 malocclusion
C. Class I type 2 malocclusion
B. Class II division 2 malocclusion
D. Class I type 3 malocclusion
32. Which of the following is not a sagittal dysplasia indicator?
A. Beta angle
C. Yen angle
B. W angle
D. Omega angle
33. Cephalogram of a patient showing beta angle <27 degree, it indicates :
A. Class I malocclusion
B. Class II malocclusion

WST-DCI-PGD-ORTHOD-2018-P-2-SET-1-B

- C. Class III malocclusion
D. Open bite
34. Steiner's compromise is indicated for the camouflage treatment of :
A. Class I malocclusion
B. Class II malocclusion
C. Periodontal compromise cases
D. Open bite cases
35. Growth treatment response vector (GTRV) was given by :
A. Liou and Huwang
B. Nanda
C. Sugawara
D. Ngan
36. Steiner's mandibular plane is formed by joining following points :
A. Go- point D
B. Go-Pog
C. Go-Me
D. Go-Gn
37. Blue grass appliance was given by :
A. Grass B
B. Haskell
C. Chug Haw Kaw
D. George Faber
38. Characteristic feature of binder's syndrome is :
A. Maxillonasal dysplasia
B. Class II malocclusion
C. Scissor bite
D. Open bite
39. Hybrid functional appliance is used to address :
A. Sagittal component of asymmetry
B. Transverse component of asymmetry
C. Vertical component of asymmetry
D. Both transverse and vertical component
40. In cleft lip palate cases in infant orthodontics treatment should be started at the age of :
A. 3 - 6 week
B. 1 - 2 week
C. After 6 week
D. Just before surgery
41. For rapid canine retraction using PDL distraction, canine is distalize at the rate of :
A. 0.5 mm /day
B. 1 mm/day
C. 1.5mm/day
D. 0.25 mm/day
42. Trans-palatal arch (TPA) is :
A. Minimum anchorage device
B. Moderate anchorage device
C. Maximum anchorage device
D. It does not provide anchorage control
43. Which of the following index is not used to access outcome in cleft patients?
A. GOSLON yardstick
B. EUROCRAN index
C. Oslo index
D. Huddart Bodenham system
44. Tip edge bracket is developed by:
A. Robert Ricketts
B. Wick Alexander
C. Jaraback
D. Peter Kesling
45. From a clinical viewpoint, the major purpose of heating stainless steel archwire is :
A. To increase the elastic limit
B. To minimize breakage

WST-DCI-PGD-ORTHOD-2018-P-2-SET-1-B

- C. To increase the resilience
D. To increase the yield strength
46. Who suggested the protocol of repetitive weekly alternate rapid maxillary expansion and constriction of the maxilla to disarticulate the maxilla for protraction?
A. Eric Liou
B. Peter Ngan
C. T Baccetti
D. V Delaire
47. Simultaneous use of class II elastics is recommended during labial torqueing of upper incisors to prevent :
A. Roller coaster effect
B. Row boat effect
C. Bauschinger effect
D. Wagon wheel effect
48. Which of the following patients undergoing orthodontic treatment have an increased incidence of root resorption?
A. Uncontrolled diabetes
B. Asthma
C. Epilepsy
D. Rheumatoid arthritis
49. The concept of driftodontics was popularized by :
A. William Wilcko
B. Ronald Roth
C. Wick Alexander
D. Howard Lang
50. Which of the following copper NiTi variant would provide activation only after consuming hot food and beverages?
A. 15°C
B. 27°C
C. 35°C
D. 40°C
51. While using ICON index to assess treatment need, treatment is indicated if the summary score is :
A. 43
B. 36-40
C. 31-35
D. < 31
52. The optimal time to treat a child with Frankel's functional regulator is when the child is in:
A. Deciduous dentition
B. Early mixed dentition
C. Late mixed dentition
D. Permanent dentition
53. Which of the following is suitable condition for interproximal stripping :
A. Triangular incisors
B. Round premolars
C. Microdontic teeth
D. Screw driver shaped teeth
54. During development of foetus, the communication between the foregut and stomodeum is established at the end of :
A. Ninth week
B. Third week
C. Seventh week
D. Fifth week
55. According to Holdaway, the ratio of the distance of the lower incisors in front of the NB line and the distance of the bony chin in front of the NB line should be :
A. 1:1
B. 1:1.5
C. 1:2
D. 2:1

WST-DCI-PGD-ORTHOD-2018-P-2-SET-1-B

56. Masticatory performance of class III patients improve after orthognathic surgery; however, it takes upto _____ years to confirm a significant improvement in masticatory performance :
- A. 3
B. 5
C. 7
D. 9
57. Which of the following is the most important reason for seeking orthodontic treatment?
- A. To enhance dental appearance
B. To enhance facial appearance
C. To improve dental health
D. To enhance self-confidence
58. The recommended treatment cut off point of "dental aesthetic index" (developed by Cons et al, 1986) is :
- A. 20
B. 25
C. 31
D. 36
59. The functional type of crossbite in which the midlines are centred in rest position but midline shift occurs in full occlusion, is called :
- A. Laterocclusion
B. Laterognathy
C. Lateral occlusion
D. Lateroversion
60. Every millimetre of trans-palatal width increase in the premolar region produces a mm increase in available maxillary arch perimeter :
- A. 0.5
B. 0.6
C. 0.7
D. 0.9
61. Following has abnormal lateral path of closure except :
- A. Narrow maxilla
B. Class II div2
C. Class III
D. Class II div 1
62. "Obliteration Index" was developed by to quantify the percentage of ossification in the mid palatal suture :
- A. Person etal
B. Bishara etal
C. Mc Namara etal
D. Issacson etal
63. Who was first to describe a technique of surgically assisted rapid maxillary expansion with mid-palatal splitting?
- A. Brown
B. Angell
C. Hass
D. Heiss
64. "Guidance theory" for palatally placed or impacted maxillary canine was proposed by:
- A. Miller and Bass
B. Hitching
C. Lappin
D. Broadbent
65. In "Index of Orthodontic Treatment Need" (IOTN) patient is placed between how many grades?
- A. 3
B. 4
C. 5
D. 6

WST-DCI-PGD-ORTHOD-2018-P-2-SET-1-B

66. Idiopathic condylar resorption (ICR) is a relatively rare condition involving mainly female adolescents. In such a condition which of the following group/ category of malocclusion is usually seen?
A. Class I
B. Class II
C. Class III
D. Any one of the above
67. Hook's law is not applicable for which of the following orthodontic wire?
A. NiTi
B. A-NiTi
C. TMA
D. Stainless steel
68. The force decay rate of orthodontic polyurethane chain elastics is to the oral Ph :
A. Inversely proportional
B. Directly proportional
C. Partially related
D. Cannot predicted easily
69. The GOSLON (Great Ormond Street, London) Yardstick was developed as a clinical tool that categorized dental arch relationships into.....discrete categories :
A. 3
B. 4
C. 5
D. 6
70. In multifactorial inheritance, the likeness of parents and offsprings can be expressed by:
A. Standard error
B. Degree of freedom
C. Correlation coefficient
D. All of the above
71. Correlation between the age and weight of a child is best represented by :
A. Line diagram
B. Bar diagram
C. Histogram
D. Pi chart
72. The shape of "occlusal force curve" is similar to the positive half of which of the following curve?
A. Sine
B. Cosine
C. Tangent
D. Combination of above
73. Who among the following was first to propagate the long term retention using banded retainers?
A. Zachrison
B. Peck
C. Sheridan
D. Hagg
74. Which of the following is a sagittal dysplasia indicator?
A. ZEN angle
B. YEN angle
C. MEN angle
D. TEN angle
75. lateral Cephalogram of a patient showing Beta angle >35 degree, which is suggestive of
A. Class I malocclusion
B. Class II malocclusion
C. Class III malocclusion
D. Open bite

WST-DCI-PGD-ORTHOD-2018-P-2-SET-1-B

76. Lateral Cephalogram of a patient showing W- angle <51 degree, which is suggestive of:
A. Class I malocclusion
B. Class II malocclusion
C. Class III malocclusion
D. Open bite
77. Concept of rapid canine retraction through distraction of the periodontal ligament was given by :
A. Liou and Huwang
B. Nanda
C. Sugawara
D. Ngan
78. Commonest transposition in mandibular arch is between :
A. Canine and first premolar
B. Canine and lateral incisor
C. Lateral and central incisor
D. Canine and central incisor
79. STb lingual bracket was developed by :
A. Craven Karz
B. Giuseppe Scuzzo and Kyoto Takemoto
C. Silvia Geron and Kyoto Takemoto
D. Dirk Weichmann
80. Use of CBCT in orthodontics is recommended in all of the following except -
A. Impacted teeth
B. Facial asymmetry
C. Orthognathic surgery
D. Class III malocclusion
81. All of the following can be used to enhance the anchorage except :
A. Osteoprotegerin
B. RANKL
C. Bisphosphonate
D. Chromosomal Arch
82. Which of the following is not the Synostosis syndrome?
A. Treacher Collin syndrome
B. Apert syndrome
C. Calvin CasePfeiffer syndrome
D. Crouzon syndrome
83. Most commonly used file formats for 3-D printing is :
A. STL file
B. DICOM file
C. STM file
D. SLS file
84. Which one is not a lingual laboratory procedure?
A. TARG
B. CLASS
C. HORA system
D. Ray Set Biaggini bracket positioner
85. Which of the following factors is not contributing to lip projection?
A. Lip thickness
B. Dental protrusion/retrusion
C. Maxillomandibular protrusion/retrusion
D. Lip length

WST-DCI-PGD-ORTHOD-2018-P-2-SET-1-B

86. Microesthetics includes all except :
A. Width relationships and golden proportion
B. Height width relationship
C. Amount of incisor and gingival display
D. Gingival height shape and contour
87. According to Burden DJ with how much overjet incidence of coronal fracture is doubled?
A. 2 mm
B. 3 mm
C. 4 mm
D. 6 mm
88. The British incisor classification was modified in 1992 by ?
A. Ballard and wayman
B. Ackerman and Proffit
C. Williams and Stephens
D. Katz
89. Which of the following is involved in fluid dynamic theory of orthodontic tooth movement?
A. Squeeze film effect
B. Halo effect
C. Roller coaster effect
D. Cart wheel effect
90. The syndrome involving bicoronalsynostosis defect and characterized by proptosis, hypertelorism, down slanting palpebral fissures, broad and medially deviated thumbs is:
A. Apert syndrome
B. Crouzon syndrome
C. Pfeifer syndrome
D. Muenke's syndrome
91. Signs of vertical growth rotation includes all except :
A. Long ramus
B. Prominent antegonial notch
C. Large gonial angle
D. Anterior inclination of condylar head
92. Which of the following is Indian innovation in the form of Cephalometric analysis and superimposition tool/
A. SmileCeph
B. QuickCeph
C. AutoCeph
D. A O Ceph
93. I point and I curve superimposition was proposed by :
A. Johnston et al
B. Standerwick et al
C. Richardson
D. McNamara
94. Which tool is used to locate musculoskeletally stable position of TMJ?
A. Leaf gauge
B. Korex gauge
C. Dontrix gauge
D. Boons gauge
95. While evaluating range of mandibular movements, lateral movement below which restricted movement is recorded is?
A. 6 mm
B. 8 mm
C. 10 mm
D. 12 mm

WST-DCI-PGD-ORTHOD-2018-P-2-SET-1-B

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WST-DCI-PGD-ORTHOD-2018-P-2-SET-1-B

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C. 2 min
D. 3 min
110. Jumping of bite concept was introduced by :
A. Anderson
B. Kingsley
C. Farrar
D. Emerson C Angell
111. Angle of convexity is :
A. SNA
B. SNB
C. N-A-Pog
D. ANB
112. Class III and pseudo class III malocclusion can be differentiated by :
A. Degree of cross bite
B. The presence of forward movement of the mandible in pseudo class III while closing
C. Molar relation and canine relationship
D. None of the above
113. Abnormal thick labial frenum results in :
A. Mid line diastema
B. Palatal inclination of the incisors
C. Labial inclination of the incisors
D. all of the above
114. The most anterior part of the bony chin is :
A. Gonion
B. Pogonion
C. Menton
D. Gnathion
115. Premature exfoliation of the primary canines indicates :
A. Arch length deficiency
B. Skeletal malocclusion
C. Arch length excess
D. None of the above
116. Maximum growth of skull is completed by the age of :
A. First 2 yrs
B. 2-4 yrs
C. 6-7 yrs
D. 9-10 yrs
117. Mid symphyseal suture closes by the age of :
A. 6 months
B. 18 months
C. 30 months
D. 5 years
118. The following dimension of the face at birth is close to the adult size :
A. Width
B. Depth
C. Height
D. All of the above

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119. The teeth with development initiated after birth are :
A. Premolars, permanent second and third molars
B. Premolars and permanent molars
C. All permanent teeth
D. Only third molars
120. With flush-terminal plane, permanent first molars will erupt :
A. initially in class I relationship
B. initially in class II relationship
C. initially in end-to-end relationship
D. initially in class III relationship
121. The growth of bone is of endochondral type in the following except:
A. Ethmoid bone
B. Hyoid
C. Zygoma
D. Stapes
122. True about Leeway Space of Nancy is :
A. The amount of leeway space is about 2.5 mm in maxillary arch
B. The amount of leeway space is about 5.6 mm in mandibular arch
C. Both A&B are correct
D. Both A&B are incorrect
123. Ugly duckling stage:
A. Is seen in maxillary central incisor region between 12-13 years of age
B. Condition is seen during eruption of permanent canines
C. Type of malocclusion is not seen in lower arch
D. Path of eruption of mandibular canine is different from that of maxillary canines
124. Mandibular second premolar:
A. Is the tooth that shows greatest variation in eruption timing
B. Shows greatest variation in occlusal form next to maxillary 1st molar
C. Is the only premolar tooth that shows 3 cusps more frequently
D. Is the tooth in the mandibular arch that is most likely to be displaced due to arch size discrepancy
125. Following are "essential diagnostic criteria" according to Graber except:
A. Case history
B. Facial photographs
C. Periapical X-rays
D. Lateral cephalograms
126. Frankfort horizontal plane is formed by joining:
A. Porion and Orbitale
B. Porion and sella
C. Nasion and sella
D. Porion and nasion
127. An 11 year old boy complains of spacing between maxillary incisors, the appropriate treatment is with:
A. Hawley's appliance
B. Fixed appliance
C. No treatment
D. Oral screen
128. Frankle -IV is used for:
A. Class -I malocclusion
B. Class -II malocclusion
C. Class -III malocclusion
D. Bimaxillary protrusion

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129. Triangular roots are all except:
A. Canines
B. Maxillary centrals
C. Maxillary laterals
D. Mandibular molars
130. Father of modern orthodontics is :
A. Anderson
B. Dewey
C. Edward H-angle
D. Lischer
131. The Cu-NiTi wire indicated in patients sensitive to pain is :
A. Type 1
B. Type 2
C. Type 3
D. Type 4
132. According to Ricketts and Engel(1979) commonly found arch forms are all except :
A. Normal
B. Ellipse
C. Tapered
D. Ovoid
133. In mushroom shaped archwire given by Fujita molar offset given is :
A. 1 mm
B. 2 mm
C. 3 mm
D. 4 mm
134. Force decay seen in natural elastic within first hour of use is :
A. 10%
B. 15%
C. 30%
D. 50%
135. For uprighting a canine with mesially inclined root, box loop is placed such that :
A. Mesial arm is kept short
B. Distal arm is kept short
C. Occlusal arm is kept short
D. All arms are kept equal
136. The drawbacks of Kesling tooth positioned include :
A. Requirement of repeated adjustment at frequent intervals
B. Difficulty in speech and risk of TMJ problems
C. Weakening of the periodontal condition of teeth
D. None of the above
137. Adjunctive orthodontic treatment means :
A. Tooth movement carried out to facilitate other dental procedures necessary to control disease and restore function
B. Orthodontic treatment which would take more than six months duration
C. Orthodontic surgical procedures carried out along with orthodontic therapy to correct dentofacial deformities
D. None of the above
138. To align the favourably impacted canine in the arch, the orthodontists should :
A. Extract the canine and then transplant it in the proper alignment
B. Remove the overlying soft tissue and bony tissue and try to pull the canine with the help of elastics applied directly to crown
C. Remove the overlying soft tissue and retract it into proper alignment with the help of removable appliance with canine retractor
D. Remove the overlying soft tissue and bony tissue and directly bond the crown of impacted canine, winding the ligature wire around the attachment, the other end of which is tied to the removable or fixed orthodontic appliance

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146. A radiograph of a 4year old child reveals no evidence of calcification of mandibular second premolars. This means that :
- A. These teeth may develop later
 - B. The child will probably never develop second premolars
 - C. Primary second molars should be extracted to allow permanent first molars to drift forward
 - D. It is too early in life to make final predictions concerning development of any permanent teeth
147. A patient came to the dentist with skeletal class III tendency and giving a history of cleft palate for which he had been operated at 3 years of age. For the correction of maxillary deficiency the dentist uses which of the following orthopaedic appliances?
- A. Head gear
 - B. Face bow with head gear
 - C. A reverse pull head gear
 - D. All of the above
148. Growth of the maxilla in the vertical direction is due to :
- A. Growth of the alveolus
 - B. Growth at sutures
 - C. Growth of the cranial base
 - D. Growth of the synchondrosis
149. The implant method of studying growth was proposed by :
- A. Scammon
 - B. Borg
 - C. Belchier
 - D. Bjork
150. Oral and nasal capsule of functional growth is related to :
- A. Periosteal matrix
 - B. Sutural matrix
 - C. Capsular matrix
 - D. None of the above

139. The role of maxillary obturator as an intra-oral prosthetic device in a cleft palate patient is :
- A. To provide a false roofing against which the child can suckle
 - B. To provide cross arch stability preventing the arch from collapsing
 - C. Both of the above
 - D. None of the above
140. Which of the following statement about the midline diastema **IS CORRECT?**
- A. Midline diastema is easy to correct and easy to retain
 - B. Midline diastema is easy to correct and difficult to retain
 - C. Midline diastema is difficult to correct and easy to retain
 - D. Midline diastema is difficult to correct and difficult to retain
141. Most commonly used appliance for the treatment of deep bite is :
- A. Removable Hawley's appliance with posterior bite plane
 - B. Removable Hawley's appliance with anterior bite plane
 - C. Removable Hawley's appliance with anterior and posterior bite plane
 - D. None of the above
142. Skeletal anterior cross bite due to retropositioned maxilla should be treated :
- A. Before termination of growth by using a protraction face mask
 - B. After termination of growth by using a protraction face mask
 - C. Before termination of growth by using head gear
 - D. After termination of growth by using head gear
143. Cephalometric examination of a patient having skeletal anterior open bite may reveal:
- A. Downward and forward rotation of the mandible
 - B. Upward rotation of the mandible
 - C. Upward and forward rotation of the mandible
 - D. Upward and backward rotation of the mandible
144. A patient of 22years of age with severe maxillary deficiency and mandibular prognathism should be best treated by :
- A. Extraction of first premolar from both the upper and lower arches
 - B. Using high pull head gear and chin cup
 - C. Surgical maxillary advancement and mandibular set back
 - D. Fixed orthodontic therapy only
145. Which of the following is the least likely to influence the anteroposterior position of maxillary incisors?
- A. Size of the apical base
 - B. Tongue buccinator mechanism
 - C. Being a concert clarinetist
 - D. Congenital absence of third molars

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1	D	41	A	81	B	121	C
2	C	42	B	82	A	122	D
3	A	43	C	83	A	123	A
4	B	44	D	84	C	124	B
5	D	45	B	85	D	125	D
6	B	46	A	86	C	126	A
7	B	47	B	87	B	127	C
8	D	48	B	88	C	128	D
9	B	49	C	89	A	129	D
10	B	50	D	90	C	130	C
11	C	51	A	91	A	131	B
12	D	52	B	92	C	132	B
13	D	53	A	93	B	133	C
14	B	54	B	94	A	134	A
15	B	55	A	95	B	135	C
16	C	56	B	96	A	136	B
17	A	57	A	97	B	137	A
18	B	58	C	98	A	138	D
19	A	59	A	99	C	139	C
20	C	60	C	100	B	140	B
21	A	61	D	101	D	141	B
22	B	62	A	102	A	142	A
23	C	63	A	103	C	143	A
24	B	64	A	104	B	144	C
25	B	65	C	105	A	145	D
26	B	66	B	106	A	146	A
27	D	67	B	107	A	147	C
28	D	68	A	108	A	148	A
29	D	69	C	109	C	149	D
30	C	70	C	110	B	150	C
31	A	71	A	111	C		
32	D	72	A	112	B		
33	B	73	A	113	A		
34	B	74	B	114	B		
35	D	75	C	115	A		
36	D	76	B	116	C		
37	B	77	A	117	B		
38	A	78	B	118	A		
39	C	79	A	119	A		
40	A	80	D	120	C		