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**MARAKGAD : APRIL/ MAY 2011**  
**SUBJECT : ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS**  
**PAPER-I : APPLIED BASIC SCIENCES**  
**(2008 Course)**

Day : Friday  
Date : 13-05-2011

Time : 9:00 A.M. To 12:00 Noon  
Max. Marks : 75.

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Draw neat labeled diagrams **WHEREVER** necessary.

**Long Essay on**

**(2 × 20 = 40)**

- 1) Discuss concept of Nature Vs Nurture.
- 2) Write in detail the anatomic structure and movements of TMJ. Add a note on its development and evolution.

**Write short Essay on**

**(5 × 7 = 35)**

- 3) Neurologic mechanism involved in orthodontic tooth movement.
- 4) Epigenetic landscape.
- 5) Prenatal development of maxilla.
- 6) Prenatal development of tongue and maturation of oral functions.
- 7) Discuss morphometrics.

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**MARAKGAD : APRIL/ MAY 2011**  
**SUBJECT : ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS**  
**PAPER-II : DIAGNOSIS AND TREATMENT PLANNING**

Day : Monday (2008 course)  
Date : 16-05-2011

Time : 9:00 A.M. To 12:00 Noon  
Max. Marks : 75.

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Draw neat labeled diagrams **WHEREVER** necessary.

**Long Essay on**

**(2 × 20 = 40)**

- 1) Discuss the role of soft tissues in orthodontic diagnosis and treatment planning.
- 2) Write in detail the pathophysiology of Obstructive Sleep Apnea.

**Write short Essay on**

**(5 × 7 = 35)**

- 3) Indications of early orthognathic surgeries.
- 4) Macro and micro esthetics.
- 5) Discuss the behavioral modification techniques useful for orthodontic patients.
- 6) Evaluation of smile in orthodontic treatment planning.
- 7) Methods of assessing facial asymmetry.

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MARAKGAD : APRIL/ MAY 2011  
SUBJECT : ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS  
PAPER-IV : ESSAY (2008 course)

Day : Friday  
Date : 20-05-2011

Time : 9.00 A.M. To 12.00 Noon  
Max. Marks : 75.

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Write Essay on

(1 × 75 = 75)

Orthodontic arch wires.

OR

Lingual orthodontics.

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**MARAKGAD : APRIL/ MAY 2011**  
**SUBJECT : ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS**  
**PAPER-III : CLINICAL ORTHODONTICS AND MECHANOTHERAPY**  
**(2008 Course)**

Day : Wednesday  
Date : 18-05-2011

Time : 9:00 A.M. To 12:00 Noon  
Max. Marks : 75.

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Draw neat labeled diagrams **WHEREVER** necessary.

**Long Essay on**

**(2 × 20 = 40)**

- 1) What are asperites? Discuss the role of friction in orthodontic tooth movement.
- 2) Discuss effective bonding of orthodontic attachments to non-enamel surfaces.

**Write short Essay on**

**(5 × 7 = 35)**

- 3) Discuss rotation control in self ligating brackets.
- 4) Discuss the various mechanics used for simultaneous intrusion and retraction of anterior teeth.
- 5) Discuss the concept of moment to force ratio in orthodontic tooth movement.
- 6) Molar uprighting springs.
- 7) Discuss the role of removable appliances in contemporary orthodontic practice.

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**MARAKKAD: APRIL / MAY - 2012**  
**SUBJECT: ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS**  
**PAPER - I: APPLIED ANATOMY, PHYSIOLOGY, PATHOLOGY, GENETICS**  
**PHYSICAL ANTHROPOLOGY AND DENTAL MATERIAL**

Day: Saturday  
Date: 12.05.2012

Time: 9.00 A.M. To 12.00 Noon  
Max. Marks: 75

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat diagrams **WHEREVER** necessary.

**Long Essay Questions:**

- Q.1** Discuss the adjustments of the maxillomandibular complex from birth to Adulthood with reference to the developing dentition. (20)
- Q.2** Discuss the controlling factors for bone modeling and remodeling. (20)

**Short Essay Questions:**

- Q.3** Infection control in orthodontics. (07)
- Q.4** Discuss Endochondral ossification Vs. Intramembranous ossification. (07)
- Q.5** Discuss canine guided Vs group guided occlusion. (07)
- Q.6** Tests of significance. (07)
- Q.7** Pain control in orthodontics. (07)

**MARAKGAD APRIL / MAY - 2012**  
**SUBJECT: ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS**  
**PAPER - II: DIAGNOSIS AND TREATMENT PLANNING**

Day: Monday  
Date: 14.05.2012

Time: 9.00 A.M. To 12.00 Noon  
Max. Marks: 75

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat diagrams **WHEREVER** necessary.

**Long Essay Questions:**

- Q.1** Discuss the pathophysiology and treatment of obstructive Sleep Apnea. (20)
- Q.2** A 11 year old female patient comes to your clinic. She has a convex profile. Her upper arch is constricted and she exhibits and mild vertical growth pattern. She also presents with a deep bite and an increased overjet of 12mm. Discuss the differential diagnosis, treatment objectives and treatment plan for this patient. (20)

**Short Essay Questions:**

- Q.3** Discuss orthodontic splints in the treatment of TMJ problems. (07)
- Q.4** What are anterior interferences and discuss their significance during finishing an orthodontic case. (07)
- Q.5** Discuss the behavioral modification techniques useful in orthodontics. (07)
- Q.6** C B C T. (07)
- Q.7** Esthetic consideration while orthodontic treatment planning. (07)

**MARAKKAD APRIL / MAY – 2012**

**SUBJECT: ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS  
PAPER – III: CLINICAL ORTHODONTICS AND MECHANOTHERAPY**

Day: Wednesday  
Date: 16.05.2012

Time: 9.00 AM To 12.00 Noon  
Max. Marks: 75

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat diagrams **WHEREVER** necessary.

**Long Essay Questions:**

- Q.1** What are asperities? Discuss the role of friction in orthodontic tooth movement. (20)
- Q.2** Discuss the role of orthodontic treatment in a cleft palate cases. (20)

**Short Essay Questions:**

- Q.3** KSIR. (07)
- Q.4** Space closure mechanics. (07)
- Q.5** Discuss retention with regards to different types of malocclusion. (07)
- Q.6** Discuss the various mechanics used for simultaneous intrusion and retraction of anterior teeth. (07)
- Q.7** Treatment for impacted canines. (07)

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**MARAKKAD: APRIL / MAY - 2012**  
**SUBJECT: ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS**  
**PAPER - IV: ESSAY**

Day: Friday  
Date: 18.05.2012

Time: 9.00 A.M. To 12.00 No.  
Max. Marks: 75

**N.B.:**

- 1) Answer any **ONE**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat diagrams **WHEREVER** necessary.

**Q.1**      Role of functional appliances in contemporary orthodontic treatment. **(75)**

**OR**

**Q.2**      Growth prediction. **(75)**

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MARAKGAD : Oct-Nov-2013

**SUBJECT : ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS**  
**PAPER-I : APPLIED ANATOMY, PHYSIOLOGY, PATHOLOGY, GENETICS**  
**PHYSICAL ANTHROPOLOGY AND DENTAL MATERIALS**

Day : Thursday  
Date : 07-11-2013

Time : 9.00 A.M. To 12.00 Noon  
Max. Marks : 75.

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the **RIGHT** indicate full marks.
- 3) Draw neat diagrams **WHEREVER** necessary.

**Long Essay Questions:**

- Q.1** Development and derivatives of first pharyngeal arches and brief about its pathogenesis. (20)
- Q.2** Effect of bracket and wire composition on frictional forces. (20)

**Short Essay Questions:**

- Q.3** Orthodontic bounding to crowns and restorations. (07)
- Q.4** Autosomal dominant traits. (07)
- Q.5** Speech difficulties due to malocclusion. (07)
- Q.6** Epigenetic factors. (07)
- Q.7** Calcium Metabolism. (07)

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**MARAKGAD : APRIL/ MAY 2013**  
**SUBJECT : ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS**  
**PAPER-I : APPLIED ANATOMY, PHYSIOLOGY, PATHOLOGY, GENETICS**  
**PHYSICAL ANTHROPOLOGY AND DENTAL MATERIALS**

Day : Thursday  
Date : 25.2013

Time : 9.00 A.M To 12.00 Noon  
Max. Marks : 75.

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**N.B.:**

- 1) All questions are **COMPULSORY**.
  - 2) Figures to the **RIGHT** indicate full marks.
  - 3) Draw neat diagrams **WHEREVER** necessary.
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**Long Essay Questions:**

- Q.1** Discuss in detail about the newer arch wires used in Orthodontics. (20)
- Q.2** Discuss the controlling factors for Bone modeling and remodeling. (20)

**Short Essay Questions:**

- Q.3** Discuss the role of genetics in external root resorption. (07)
- Q.4** Elastomeric ligatures and chains. (07)
- Q.5** Management of foreign body ingestion of Orthodontic origin. (07)
- Q.6** Discuss the response of the periodontal ligament to physiological force. (07)
- Q.7** Endochondral ossification vs Intramembranous ossification. (07)

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MARAKGAD : OCT. NOV. 2013

**SUBJECT : ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS**  
**PAPER-II : DIAGNOSIS AND TREATMENT PLANNING**

Day : Saturday  
Date : 09.11.2013

Time : 9:00 A.M. To 12:00 Noon  
Max. Marks : 75.

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the **RIGHT** indicate full marks.
- 3) Draw neat diagrams **WHEREVER** necessary.

**Long Essay Questions:**

- Q.1** Discuss the etiology, diagnosis and treatment modalities of facial asymmetry. (20)
- Q.2** Discuss various growth prediction methods. (20)

**Short Essay Questions:**

- Q.3** Limitations of angle ANB. (07)
- Q.4** Psychological management of Rebellious child. (07)
- Q.5** Management of Bolton's discrepancy. (07)
- Q.6** Occlusogram. (07)
- Q.7** Kesling diagnostic setup. (07)

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**MARAKGAD : APRIL/ MAY 2013**  
**SUBJECT : ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS**  
**PAPER-II : DIAGNOSIS AND TREATMENT PLANNING**

Day : *Saturday*  
Date : *4.5.2013*

Time : *9.00 A.M. To 12.00 Noon*  
Max. Marks : 75.

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**N.B.:**

- 1) All questions are **COMPULSORY**.
  - 2) Figures to the **RIGHT** indicate full marks.
  - 3) Draw neat diagrams **WHEREVER** necessary.
- 

**Long Essay Questions:**

- Q.1** Discuss the pathophysiology of Obstructive Sleep Apnea. (20)
- Q.2** Write in details about recent advances in Craniofacial Imaging in Orthodontics. (20)

**Short Essay Questions:**

- Q.3** Discuss the role of splints for diagnosing TMJ problems. (07)
- Q.4** What are anterior interferences and discuss their significance during finishing an orthodontic case. (07)
- Q.5** Grummon's Cephalometric Analysis. (07)
- Q.6** Self correcting malocclusions - discuss. (07)
- Q.7** Envelope of discrepancy - discuss. (07)

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**MARAKGAD : Oct. Nov. 2013**  
**SUBJECT : ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS**  
**PAPER-III : CLINICAL ORTHODONTICS AND MECHANOTHERAPY**

Day : Monday  
Date : 11.11.2013

Time : 9.00 A.M. To 12.00 Noon,  
Max. Marks : 75.

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**N.B.:**

- 1) All questions are **COMPULSORY**.
  - 2) Figures to the **RIGHT** indicate full marks.
  - 3) Draw neat diagrams **WHEREVER** necessary.
- 

**Long Essay Questions:**

- Q.1** Discuss the various approaches and appliances in the management of vertical deep over bite. (20)
- Q.2** Distraction osteogenesis in mandible. (20)

**Short Essay Questions:**

- Q.3** Hybrid expansion appliances. (07)
- Q.4** Molar protraction mechanics. (07)
- Q.5** 0.018 slot vs 0.022 slot. (07)
- Q.6** MARS appliance. (07)
- Q.7** Versatility of MBT appliance. (07)

**MARAKGAD : APRIL/ MAY 2013**  
**SUBJECT : ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS**  
**PAPER-III : CLINICAL ORTHODONTICS AND MECHANOTHERAPY**

Day : *Monday*  
Date : *6.5.2013*

Time : *9.00 AM To 12.00 Noon*  
Max. Marks : 75.

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**N.B.:**

- 1) All questions are **COMPULSORY**.
  - 2) Figures to the **RIGHT** indicate full marks.
  - 3) Draw neat diagrams **WHEREVER** necessary.
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**Long Essay Questions:**

- Q.1** Diagnosis and management of early and late skeletal class III malocclusion. (20)
- Q.2** What are asperities? Discuss the role of friction in Orthodontics. (20)

**Short Essay Questions:**

- Q.3** Passive v/s active self ligating brackets. (07)
- Q.4** Essix retainer. (07)
- Q.5** Reversal of white spots (decalcification). (07)
- Q.6** Loops and helices in Orthodontics. (07)
- Q.7** Utility arches. (07)

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**MARAKGAD : APRIL/ MAY 2013**  
**SUBJECT : ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS**  
**PAPER-IV : ESSAY**

Day : *Wednesday*  
Date : *8.5.2013*

Time : *9:00 A.M. To 12:00 Noon*,  
Max. Marks : 75.

**N.B.:**

- 1) Answer any **ONE**.
- 2) Figures to the **RIGHT** indicate full marks.
- 3) Draw neat diagrams **WHEREVER** necessary.

Role of Functional Appliances in contemporary orthodontic.

(75)

**OR**

Sterilization in Orthodontics.

(75)

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MARAKGAD : Oct. Nov-2013  
SUBJECT : ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS  
PAPER-IV : ESSAY

Day : Wednesday  
Date : 13-11-2013

Time : 9.00 A.M. To 12.00 Noon.  
Max. Marks : 75.

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**N.B.:**

- 1) Answer any **ONE**.
  - 2) Figures to the **RIGHT** indicate full marks.
  - 3) Draw neat diagrams **WHEREVER** necessary.
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One phase versus Two phase treatment for class II malocclusion. (75)

OR

Limitations of Orthodontics. (75)

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**MARAKGAD: APRIL / MAY 2014**  
**SUBJECT : ORTHODONTICS & DENTOFACIAL OTHROPEDICS**  
**PAPER - I: APPLIED ANATOMY, PHYSIOLOGY, PATHOLOGY, GENETICS**  
**PHYSICAL ANTHROPOLOGY & DENTAL MATERIAL**

Day : **Saturday**  
Date : **19-04-2014**

Time : **9:00AM TO 12:00NOON**  
Max. Marks : 75

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat diagrams **WHEREVER** necessary.

**Long Essay Questions:**

- Q.1** Discuss the effect of drugs on orthodontic tooth movement. [20]
- Q.2** Discuss Theories of growth and current methods in growth prediction and its importance in Orthodontics. [20]

**Short Essay Questions:**

- Q.3** Molecular basis of genetics. [07]
- Q.4** Evolution of human condyle. [07]
- Q.5** Mechanical properties of heat activated NiTi wires. [07]
- Q.6** Craniometry and anthropometry. [07]
- Q.7** Banding / Bonding Cements. [07]

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WINTER - 2014

MARAKGAD:

**SUBJECT : ORTHODONTICS & DENTOFACIAL OTHROPEDICS**  
**PAPER - I: APPLIED ANATOMY, PHYSIOLOGY, PATHOLOGY, GENETICS**  
**PHYSICAL ANTHROPOLOGY & DENTAL MATERIAL**

Day : Tuesday  
Date : 11-11-2014

Time : 9.00 A.M. To 12.00 Noon  
Max. Marks : 75

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat diagrams **WHEREVER** necessary.

**Long Essay Questions:**

- Q.1 Anatomical limitations of orthodontic treatment. [20]
- Q.2 Discuss the emotional growth and development through infancy upto adulthood with reference to orthodontic treatment. [20]

**Short Essay Questions:**

- Q.3 Self etching primer. [07]
- Q.4 Esthetic wires. [07]
- Q.5 Physiology of speech. [07]
- Q.6 Randomized clinical trial. [07]
- Q.7 Saliva. [07]

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**MARAKGAD: APRIL / MAY 2014**  
**SUBJECT : ORTHODONTICS & DENTOFACIAL OTHROPEDICS**  
**PAPER - II: DIAGNOSIS & TREATMENT PLANNING**

Day : **Monday**  
Date : **21-04-2014**

Time : **9:00AM TO 12:00 NOON**  
Max. Marks : 75

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat diagrams **WHEREVER** necessary.

**Long Essay Questions:**

- Q.1** Discuss the etio-pathology of cleft lip and palate. Describe the various orthodontic procedures carried out in the management of CLCP. [20]
- Q.2** Discuss the management of a difficult child in the orthodontic clinic. [20]

**Short Essay Questions:**

- Q.3** Psychological state of an adult patient undergoing orthodontic treatment. [07]
- Q.4** Approach of orthodontic treatment for periodontally compromised adult patient. [07]
- Q.5** Steps in Orthodontic treatment planning. [07]
- Q.6** Role of Internet in orthodontics. [07]
- Q.7** STO. [07]

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MARAKGAD:

WINTER - 2014

SUBJECT : ORTHODONTICS & DENTOFACIAL OTHROPEDICS  
PAPER - II: DIAGNOSIS & TREATMENT PLANNING

Day : Thursday  
Date : 13-11-2014

Time : 9.00 A.M. To 12.00 Noon  
Max. Marks : 75

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat diagrams **WHEREVER** necessary.

**Long Essay Questions:**

- Q.1 How will you assess the antero-posterior apical base discrepancy? Formulate your own lateral cephalometric composite analysis for a preadolescent with Skeletal vertical dysplasia and justify. [20]
- Q.2 Discuss latest diagnostic aids in orthodontics. Describe in detail role of CBCT in orthodontics. [20]

**Short Essay Questions:**

- Q.3 Write the management of derangement of condyle-disc complex. [07]
- Q.4 Methods of predicting Facial growth changes. [07]
- Q.5 Macro and micro-esthetics. [07]
- Q.6 Write the factors affecting the response of early treatment. [07]
- Q.7 Occlusogram. [07]

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**MARAKGAD: APRIL / MAY 2014**  
**SUBJECT : ORTHODONTICS & DENTOFACIAL OTHROPEDICS**  
**PAPER - III: CLINICAL ORTHODONTICS & MECHANOTHERAPY**

Day : Friday  
Date : 25-04-2014

Time : 9:00AM-TO 12:00NOON.  
Max. Marks : 75

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat diagrams **WHEREVER** necessary.

**Long Essay Questions:**

- Q.1** Discuss the protocol of finishing and detailing procedure. [20]
- Q.2** Discuss various methods for correction of transverse discrepancies and appliances use for the same. [20]

**Short Essay Questions:**

- Q.3** Active retainers. [07]
- Q.4** Progressive Torque. [07]
- Q.5** Aligners. [07]
- Q.6** Management of scissors bite. [07]
- Q.7** In extraction cases closure of Excess space in mandibular arch. [07]

MARAKGAD:

WINTER - 2014

**SUBJECT : ORTHODONTICS & DENTOFACIAL ORTHOPEDICS**  
**PAPER - III: CLINICAL ORTHODONTICS & MECHANOTHERAPY**

Day : Saturday  
Date : 15-11-2014

Time : 9.00 A.M. To 12.00 Noon  
Max. Marks : 75

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat diagrams **WHEREVER** necessary.

**Long Essay Questions:**

- Q.1** A ten year old boy reports to Dept. of orthodontia with the chief complaint of proclined maxillary anterior teeth. Complete clinical evaluation and Cephalometric analysis reveals a skeletal class II malocclusion. Write the management of the same. [20]
- Q.2** Controversies of growth modification therapy in the treatment of class III malocclusion. [20]

**Short Essay Questions:**

- Q.3** Periodontal surgical retention procedures. [07]
- Q.4** KSIR Arch. [07]
- Q.5** Inter-disciplinary Treatment of Orthodontic Patient [07]
- Q.6** Sliding vs loop mechanics. [07]
- Q.7** Force vector analysis of class II elastics. [07]

**MARAKGAD: APRIL / MAY 2014**  
**SUBJECT : ORTHODONTICS & DENTOFACIAL OTTHROPEDICS**  
**PAPER - IV: ESSAY**

Day : Monday  
Date : 28.04-2014

Time : 9:00AM TO 12:00NOON  
Max. Marks : 75

**N.B.:**

- 1) Answer **ANY ONE**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat diagrams **WHEREVER** necessary.

**Q.1** Updates on biological foundations of tooth movement.

[75]

**OR**

**Q.2** '3-D Imaging in Orthodontics'.

[75]

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MARAKGAD:

**WINTER - 2014**

**SUBJECT : ORTHODONTICS & DENTOFACIAL OTTHROPEDICS**  
**PAPER - IV: ESSAY**

Day : Monday  
Date : 17-11-2014

Time : 9.00 A.M. To 12.00 Noon  
Max. Marks : 75

**N.B.:**

- 1) Answer **ANY ONE**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat diagrams **WHEREVER** necessary.

**Q.1** Co-operation for Orthodontic Treatment.

[75]

**OR**

**Q.2** Torque Control.

[75]

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**MARAKGAD : SUMMER 2015**  
**SUBJECT : PAPER-I – APPLIED ANATOMY, PHYSIOLOGY, PATHOLOGY,**  
**GENETICS, PHYSICAL ANTHROPOLOGY AND DENTAL MATERIALS**

Day : Monday  
Date : 20-04-2015

Time : 9-00 A.M. To 12-00  
Max. Marks : 75. Noon

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the **RIGHT** indicate full marks.
- 3) Draw labeled diagrams **WHEREVER** necessary.

**Long Essay Questions:**

- Q.1 Discuss the physiology of stomatognathic system in relation to malocclusion. (20)
- Q.2 Describe the orthodontic bonding materials and techniques used. (20)

**Short Essay Questions:**

- Q.3 Evolution of teeth (07)
- Q.4 Role of Analgesics in orthodontics. (07)
- Q.5 In-vivo studies in clinical orthodontic research. (07)
- Q.6 Genetic limitations for orthodontic treatment. (07)
- Q.7 Beta titanium alloy. (07)

**MARAKGAD : WINTER - 2015**  
**SUBJECT : PAPER-I – APPLIED ANATOMY, PHYSIOLOGY, PATHOLOGY,  
GENETICS, PHYSICAL ANTHROPOLOGY AND DENTAL MATERIALS**

Day : Saturday  
Date : 31/10/2015

Time : 09.00 AM TO 12.00 NOON  
Max. Marks : 75.

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the **RIGHT** indicate full marks.
- 3) Draw labeled diagrams **WHEREVER** necessary.

**Long Essay Questions:**

- Q.1 Discuss in detail the development of hard palate and enumerate the pathophysiology in cleft lip and palate patients. (20)
- Q.2 Discuss nutritional and hormonal factors affecting growth and development of face. (20)

**Short Essay Questions:**

- Q.3 Regulation of calcium metabolism in the human body. (07)
- Q.4 Obstructive sleep apnea. (07)
- Q.5 Infection control during orthodontic treatment. (07)
- Q.6 Paired T-Tests. (07)
- Q.7 Balanced diet for child during mixed dentition stage. (07)

**MARAKGAD : SUMMER 2015**  
**SUBJECT : PAPER-II – DIAGNOSIS AND TREATMENT PLANNING**

Day : *Wednesday*  
Date : *29.04.2015*

Time : *9.00 A.M. To 12.00*  
Max. Marks : 75. *Noon*

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the **RIGHT** indicate full marks.
- 3) Draw labeled diagrams **WHEREVER** necessary.

**Long Essay Questions:**

- Q.1 Write the factors influencing orthodontic tooth movement. What are the biologic considerations that limit the potential of adult orthodontic treatment? (20)
- Q.2 What is 'Pseudo class-III' malocclusion? How will you analyze a lateral cephalogram of 8 year old child with anterior cross bite? (20)

**Short Essay Questions:**

- Q.3 "2 x 4" appliance. (07)
- Q.4 Role of 'growth spurts' in orthodontic treatment planning. (07)
- Q.5 Etiopathogenesis of developing mandibular asymmetry. (07)
- Q.6 Tongue space analysis. (07)
- Q.7 Envelop of Discrepancies. (07)

**MARAKGAD : WINTER - 2015**  
**SUBJECT : PAPER-II – DIAGNOSIS AND TREATMENT PLANNING**

Day : Monday  
Date : 02/11/2015

Time : 09.00 AM TO 12.00 NOON  
Max. Marks : 75.

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the **RIGHT** indicate full marks.
- 3) Draw labeled diagrams **WHEREVER** necessary.

**Long Essay Questions:**

- Q.1 How will you manage handicapped child in orthodontic practice? (20)
- Q.2 New Dimensions in Orthodontic Imaging and evaluation. (20)

**Short Essay Questions:**

- Q.3 Bolton's analysis. (07)
- Q.4 Current status of growth prediction. (07)
- Q.5 IOTN Index (07)
- Q.6 Orthodontic treatment planning for Borderline cases. (07)
- Q.7 Natural head position. (07)

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**MARAKGAD : SUMMER 2015**  
**SUBJECT : PAPER-III – CLINICAL ORTHODONTICS AND MECHANOTHERAPY**

Day : Friday  
Date : 24.04.2015

Time : 9.00 A.M. To 12.00 Noon  
Max. Marks : 75.

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the **RIGHT** indicate full marks.
- 3) Draw labeled diagrams **WHEREVER** necessary.

**Long Essay Questions:**

- Q.1** What is friction? Discuss the role of friction in orthodontics. Write about the self-ligating bracket system. (20)
- Q.2** Discuss the controversies of treatment timings of skeletal Class-II malocclusion in a growing child. (20)

**Short Essay Questions:**

- Q.3** Splint in TMD. (07)
- Q.4** Principles of treatment in open bite cases. (07)
- Q.5** Surgery first concept. (07)
- Q.6** Biomechanical considerations in the use of micro implants. (07)
- Q.7** Molar distalization. (07)

**MARAKGAD : WINTER - 2015**  
**SUBJECT : PAPER-III – CLINICAL ORTHODONTICS AND MECHANOTHERAPY**

Day : Wednesday  
Date : 04/11/2015

Time : 09.00 AM TO 12.00 NOON  
Max. Marks : 75.

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the **RIGHT** indicate full marks.
- 3) Draw labeled diagrams **WHEREVER** necessary.

**Long Essay Questions:**

- Q.1 Discuss the space closure mechanics in minimum anchorage requirement with second premolar extraction case in PEA prescription. Write the factors involved in considering the Machanotherapy. (20)
- Q.2 Discuss mini-implants as an anchorage in orthodontics. (20)

**Short Essay Questions:**

- Q.3 Alpha-Beta Angle. (07)
- Q.4 Management of impacted and maxillary canine. (07)
- Q.5 Invisible retainers. (07)
- Q.6 Hybrid appliances. (07)
- Q.7 Inter-proximal reduction. (07)

**MARAKGAD : SUMMER 2015**  
**SUBJECT : PAPER-IV – AN ESSAY**

Day : Monday  
Date : 27-04-2015

Time : 9:00 A.M. To 12:00  
Max. Marks : 75. Noon

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Draw labeled diagrams **WHEREVER** necessary.

**Q.1** Write an essay on:

**(75)**

a) Accelerated Orthodontics

**OR**

b) Lingual orthodontics.

\* \* \*

**MARAKGAD : WINTER - 2015**  
**SUBJECT : PAPER-IV – AN ESSAY**

Day : Friday  
Date : 06/11/2015

Time : 09.00 AM TO 12.00 NOON  
Max. Marks : 75.

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Draw labeled diagrams **WHEREVER** necessary.

**Q.1** Write an essay on:

**(75)**

- a) Orthodontic Treatment Planning.

**OR**

- b) Orthodontic Arch wires.

\* \* \*

**MARAKGAD : SUMMER – 2016**  
**SUBJECT : APPLIED ANATOMY, PHYSIOLOGY, PATHOLOGY GENETICS**  
**PHYSICAL ANTHROPOLOGY & DENTAL MATERIALS**  
**(PAPER – I)**

Day : Monday  
Date : 06/06/2016

Time : 09.00 AM TO 12.00 NOON  
Max. Marks : 75

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.

**Long Essay Questions:**

- Q.1** Which are the conditions caused due to parathyroid hormone deficiencies? [20]  
Discuss how an orthodontist would tackle such conditions.
- Q.2** Discuss in detail the developmental changes of the soft tissues of the face. [20]

**Short Essay Questions:**

- Q.3** Goslon Yardstick [07]
- Q.4** Calcium Metabolism [07]
- Q.5** Chi-Square Test [07]
- Q.6** Twin studies [07]
- Q.7** Development of Tongue [07]

\* \* \* \*

**MARAKGAD : SUMMER – 2016**  
**SUBJECT : DIAGNOSIS & TREATMENT PLANNING**  
**(PAPER – II)**

Day : Wednesday  
Date : 08/06/2016

Time : 09.00 AM TO 12.00 NOON  
Max. Marks : 75

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.

**Long Essay Questions:**

- Q.1 Discuss in detail the soft tissue evaluation in Orthognathic Surgical treatment planning. [20]
- Q.2 Discuss the various orthodontic implications in psychologically and clinically handicapped child. How will you manage such a child in your office. [20]

**Short Essay Questions:**

- Q.3 Pitch, Yaw and Roll [07]
- Q.4 Enlow's Counterpart Analysis [07]
- Q.5 Role of the Orthodontist and Temporomandibular Dysfunction [07]
- Q.6 Methods of assessing facial asymmetry [07]
- Q.7 Importance of MRI in diagnosis of TMD [07]

**MARAKGAD : SUMMER – 2016**  
**SUBJECT : CLINICAL ORTHODONTICS & MECHANOTHERAPY**  
**(PAPER – III)**

Day : Friday  
Date : 10/06/2016

Time : 09.00 AM TO 12.00 NOON  
Max. Marks : 75

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.

**Long Essay Questions:**

- Q.1** Discuss VME and its management. [20]
- Q.2** Discuss the scope and limitations of early orthodontic treatment. [20]

**Short Essay Questions:**

- Q.3** Problems while retracting incisor segment [07]
- Q.4** Force vector analysis of Class II elastics and their effects [07]
- Q.5** Brader Arch Form [07]
- Q.6** Nasoalveolar Molding [07]
- Q.7** Combination Bracket Systems [07]
- \* \* \* \*

**MARAKGAD : SUMMER – 2016**  
**SUBJECT : ESSAY**  
**(PAPER – IV)**

Day : Monday  
Date : 13/06/2016

Time : 09.00 AM TO 12.00 NOON  
Max. Marks : 75

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.

**Q.1** Orthognathic Surgery vs. Distraction Osteogenesis. **[75]**

**OR**

**Q.2** Accelerated Orthodontics. **[75]**

\* \* \* \*

**MARKAND GAD SUMMER 2017**  
**SUBJECT : PAPER-I : APPLIED ANATOMY, PHYSIOLOGY, PATHOLOGY**  
**GENETICS PHYSICAL ANTHROPOLOGY AND DENTAL MATERIALS**

Day : Friday  
Date : 19/05/2017

Time: 09.00 AM TO 12.00 NOON  
Max. Marks: 75.

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the **RIGHT** indicate full marks.
- 3) Draw neat diagrams **WHEREVER** necessary.

**Long Essay Questions:**

- Q.1** Describe role of nutrition and hormones in growth and development. (20)
- Q.2** Describe with example the servo-system theory of growth and development of face and write its significance in clinical orthodontics. (20)

**Short Essay Questions:**

- Q.3** Management of foreign body ingestion of orthodontic origin. (07)
- Q.4** Discuss homeobox genes and maturation. (07)
- Q.5** Evolution of Temporomandibular joint. (07)
- Q.6** NSAID's used in Orthodontics. (07)
- Q.7** Management of haemophilic patients. (07)

**MARKANDTAD SUMMER 2017**  
**SUBJECT : PAPER-II : DIAGNOSIS AND TREATMENT PLANNING**

Day : Monday  
Date : 22/05/2017

Time: 09.00 AM TO 12.00 NOON  
Max. Marks: 75.

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the **RIGHT** indicate full marks.
- 3) Draw neat diagrams **WHEREVER** necessary.

**Long Essay Questions:**

- Q.1 Discuss the etiology and essential investigations in treatment planning of facial asymmetry. (20)
- Q.2 Discuss the management of physically and mentally handicapped child in Orthodontics. (20)

**Short Essay Questions:**

- Q.3 Progressive torque. (07)
- Q.4 Functional Analysis of Tongue. (07)
- Q.5 Development of Speech. (07)
- Q.6 Smile Esthetics. (07)
- Q.7 Diagnosis and investigations for impacted canines. (07)

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**MARKANDYAD : SUMMER 2017**  
**SUBJECT : PAPER-III : CLINICAL ORTHODONTICS AND MECHANOTHERAPY**

Day : Wednesday  
Date : 24/05/2017

Time: 09.00 AM TO 12.00 NOON  
Max. Marks: 75.

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the **RIGHT** indicate full marks.
- 3) Draw neat diagrams **WHEREVER** necessary.

**Long Essay Questions:**

- Q.1** Classify fixed functional appliances and discuss in detail the recent trends in fixed functional appliances. (20)
- Q.2** Management of high angle cases. (20)

**Short Essay Questions:**

- Q.3** Nonsurgical management of transverse dimension. (07)
- Q.4** Use of orthodontic microscrews in controlling vertical growth of the face. (07)
- Q.5** Infantile orthopedics. (07)
- Q.6** Hybrid Appliance (07)
- Q.7** Accelerated orthodontics. (07)

**MARKANDGAD SUMMER 2017**  
**SUBJECT : PAPER-IV : ESSAY**

Day : Friday  
Date : 26/05/2017

Time: 09.00 AM TO 12.00 NOON  
Max. Marks: 75.

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**N.B.:**

- 1) Figures to the **RIGHT** indicate full marks.
  - 2) Draw neat diagrams **WHEREVER** necessary.
- 

Controversies in Orthodontics.

(75)

**OR**

Treatment considerations in Adult Orthodontics.

(75)

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**M.D.S. ORTHODONTICS & DENTOFACIAL ORTHOPEDICS :  
SUMMER - 2018**

**SUBJECT: PAPER-IV – ESSAY**

Day : **Friday**  
Date : **15/06/2018**

**S-2018-3618**

Time : **09.00 AM TO 12.00 NOON**  
Max. Marks: 75.

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**N.B.:**

- 1) All questions are **COMPULSORY**.
  - 2) Figures to the right indicate **FULL** marks.
- 

**Q.1** Diagnosis-Hard and Soft tissue paradigms! (75)

**OR**

**Q.2** Extraction vs. Non-extraction. (75)

\* \* \*

150618-m-dental-pune

**M.D.S. Orthodontics & Dentofacial Orthopedics : SUMMER - 2019**  
**SUBJECT: PAPER – III: CLINICAL ORTHODONTICS AND MECHANOTHERAPY**

Day: Thursday  
Date: 06/06/2019

**S-2019-4074**

Time: 09.00 AM TO 12.00 NOON  
Max. Marks: 75

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat labeled diagrams **WHEREVER** necessary.

**Long Essay Questions:**

- Q.1 Discuss the various methods of levelling the arches. (20)
- Q.2 Discuss management of impacted canines. (20)

**Short Essay Questions:**

- Q.3 Obstructive Sleep Apnea (07)
- Q.4 Index of Complexity Outcome and Need (ICON). (07)
- Q.5 Differential force technique. (07)
- Q.6 Surgery First (07)
- Q.7 Torque Control in Orthodontics. (07)

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**M.D.S. Orthodontics & Dentofacial Orthopedics : SUMMER - 2019**  
**SUBJECT: PAPER – II: DIAGNOSIS AND TREATMENT PLANNING**

Day: Monday  
Date: 03/06/2019

Time: 09.00 AM TO 12.00 NOON  
Max. Marks: 75

**S-2019-4073**

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat labeled diagrams **WHEREVER** necessary.

**Long Essay Questions:**

- Q.1** Discuss the diagnosis and treatment planning of periodontically compromised orthodontics patients. (20)
- Q.2** Formulate your own lateral cephalometric composite analysis for a preadolescent with skeletal vertical dysplasia and justify the same. (20)

**Short Essay Questions:**

- Q.3** T scan. (07)
- Q.4** Index of Orthodontic Treatment Needs. (IOTN) (07)
- Q.5** Meta- analysis. (07)
- Q.6** Smile Esthetics. (07)
- Q.7** Explain Natural head position (NHP) and Natural head orientation (NHO). (07)

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**M.D.S. PART-I (2018 COURSE)**  
**(ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS): SUMMER-2019**  
**SUBJECT: BASIC SCIENCES**

Day: Friday  
Date: 28/06/2019

**S-2019-4088-D**

Time: 09.00 AM TO 12.00 NOON  
Max. Marks: 100

**N.B:**

- 1) All questions are **COMPULSORY**.
- 2) Draw diagram **WHEREVER** necessary.

- |      |  |      |
|------|--|------|
| Q.1  | Write a note on: Role Prostaglandins in Orthodontic tooth movement.              | (10) |
| Q.2  | Discuss developmental anomalies occurring due to 1 <sup>st</sup> branchial arch. | (10) |
| Q.3  | Discuss post-natal growth of nose.   | (10) |
| Q.4  | Write a note on: Esthetic archwires.   | (10) |
| Q.5  | Discuss genetically controlled malocclusions.                                    | (10) |
| Q.6  | Write note on test of significance.  | (10) |
| Q.7  | Discuss the evolution of teeth.  | (10) |
| Q.8  | Facial indices in assessment of arch form.                                       | (10) |
| Q.9  | Sterilization in Orthodontics.   | (10) |
| Q.10 | Write a note on: Twin studies.   | (10) |

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**M.D.S. Orthodontics & Dentofacial Orthopedics : SUMMER - 2019**  
**SUBJECT: PAPER – IV: ESSAY**

Day: Saturday  
Date: 08/06/2019

Time: 09.00 AM TO 12.00 NOON  
Max. Marks: 75

**S-2019-4075**

**N.B.:**

- 1) Draw neat labeled diagrams **WHEREVER** necessary.
- 

**Write an Essay on:**

**1 × 75= 75 marks**

Advances in Treating Skeletal Discrepancies only with Orthodontics.

**OR**

Aligners in Orthodontics.

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**M.D.S. Orthodontics & Dentofacial Orthopedics : SUMMER - 2019**  
**SUBJECT: PAPER – I: APPLIED ANATOMY, PHYSIOLOGY, PATHOLOGY**  
**GENETICS PHYSICAL ANTHROPOLOGY & DENTAL MATERIALS**

Day: Saturday  
Date: 01/06/2019

Time: 09.00 AM TO 12.00 NOON  
Max. Marks: 75

**S-2019-4072**

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat labeled diagrams **WHEREVER** necessary.

**Long Essay Questions:**

**Q.1** Discuss NiTi wires. (20)

**Q.2** Discuss the role of neural crest cells in growth of the human face. (20)

**Short Essay Questions:**

**Q.3** Tests of significance. (07)

**Q.4** Importance of nutrition in orthodontics. (07)

**Q.5** Name the syndromes associated with supernumerary teeth and discuss the features of one these syndromes. (07)

**Q.6** Enlow's V principle. (07)

**Q.7** Stem cells and their significance. (07)

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**M.D.S. PART-I (2018 COURSE)**  
**(ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS): SUMMER 2020**  
**SUBJECT: BASIC SCIENCES**

Day: Friday  
Date: 11-9-2020

Time: 9-00 A.M. To 12.00  
Max. Marks: 100 P.M.

S-2020-20247

**N.B:**

- 1) All questions are **COMPULSORY**.
- 2) Draw diagram **WHEREVER** necessary.

- |      |  |      |
|------|--|------|
| Q.1  | Discuss Endochondral Vs Intramembranous ossification.  | (10) |
| Q.2  | Role of nutrition in development of face and occlusion.  | (10) |
| Q.3  | Write a note on: Homeo box gene.   | (10) |
| Q.4  | Discuss in detail muscle functions and malocclusion.   | (10) |
| Q.5  | Hypersensitivity reactions in relation to Orthodontics.  | (10) |
| Q.6  | Prenatal development of tongue and maturation of oral function.  | (10) |
| Q.7  | Write a note on: Randomised clinical trial.  | (10) |
| Q.8  | Discuss anatomical limitations of Orthodontic treatment.   | (10) |
| Q.9  | Write a note on: Evolution of human condyle.   | (10) |
| Q.10 | Enumerate different generations of bonding system and write a note on self-etch and moisture insensitive primer. | (10) |

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**M. D. S. (ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS) : SUMMER - 2020**  
**SUBJECT : PAPER - I : APPLIED ANATOMY, PHYSIOLOGY, PATHOLOGY**  
**GENETICS PHYSICAL ANTHROPOLOGY AND DENTAL MATERIALS**

Day : *Thursday*  
Date : *3-9-2020*

Time : *9-00 A.M. To 12-00 P.M*  
Max. Marks : 75

*S-2020-7392*

**N. B. :**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat and labelled diagrams **WHEREVER** necessary.

**Long Essay Questions:**

- Q. 1 Describe the role of nutrition and hormones in growth and development. (20)
- Q. 2 Discuss in detail the development of hard palate and enumerate the pathophysiology in cleft palate patients. (20)

**Short Essay Questions:**

- Q. 3 Infection control during orthodontic treatment. (07)
- Q. 4 Hyalinization. (07)
- Q. 5 Haemophilia and its implications in orthodontics. (07)
- Q. 6 Oedipus Complex. (07)
- Q. 7 Primers used in orthodontics. (07)

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M. D. S. (ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS) : SUMMER – 2020  
SUBJECT : PAPER – II : DIAGNOSIS AND TREATMENT PLANNING

Day : Saturday  
Date : 5-9-2020 S-2020-7393

Time : 9:00 A.M. To 12:00 P.M.  
Max. Marks : 75

N. B. :

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat and labelled diagrams **WHEREVER** necessary.

**Long Essay Questions:**

- Q. 1 Discuss the management of physically and mentally handicapped child in (20)  
orthodontics.
- Q. 2 Discuss in detail Smile Esthetics. (20)

**Short Essay Questions:**

- Q. 3 Orthodontic splints in the treatment of TMJ problems. (07)
- Q. 4 Pitch, roll and yaw. (07)
- Q. 5 Progressive torque. (07)
- Q. 6 Etiopathogenesis of developing mandibular asymmetry. (07)
- Q. 7 Enlow's counterpart analysis. (07)

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**M. D. S. (ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS) : SUMMER - 2020**  
**SUBJECT : PAPER - III : CLINICAL ORTHODONTICS AND MECHANOTHERAPY**

Day : Monday  
Date : 7.9.2020

Time : 9-00 A.M to 12-00 P.M  
Max. Marks : 75

S-2020-7394

N. B. :

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat and labelled diagrams **WHEREVER** necessary.

**Long Essay Questions:**

- Q. 1 Classify Fixed Functional Appliances and discuss in detail the recent trends of the same. (20)
- Q. 2 Discuss in detail about finishing and detailing. (20)

**Short Essay Questions:**

- Q. 3 SARPE. (07)
- Q. 4 Headgear and its Biomechanics. (07)
- Q. 5 Continuous vs Segmental Mechanics. (07)
- Q. 6 Management of Gummy Smile. (07)
- Q. 7 Accelerated Orthodontics. (07)

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M. D. S. (ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS) : SUMMER – 2020  
SUBJECT : PAPER – IV : ESSAY

Day : Wednesday

Date : 9-9-2020

Time : 9-00 A.M. To 12-00 P.M.

Max. Marks : 75

S-2020-7395

N. B. :

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat and labelled diagrams **WHEREVER** necessary.

Q. 1 Discuss in detail Controversies in orthodontics.

(75)

OR

Discuss in detail Self ligating brackets.

(75)

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090920-m-dch-pune

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**M.D.S. Part-I (2018 Course) (Orthodontics & Dentofacial Orthopedics) : Summer – 2021**

**Subject: Basic Sciences**

**Day:** Monday  
**Date:** 06-09-2021

**Time** 09:00 AM-12:00 PM  
**Max. Marks: 100**

**S-20247-2021**

**N. B.**

- 1) All questions are **COMPULSORY** and carry **EQUAL** marks.
- 2) Draw neat labeled diagrams **WHEREVER** necessary.

- 
- Q. 1 Write note on recent advances in Orthodontic Materials
  - Q. 2 Calcium metabolism and its significance in Orthodontics
  - Q. 3 Discuss the management of Hemophilic patient
  - Q. 4 Infection control in Orthodontic office
  - Q. 5 Write a note on Paired T test
  - Q. 6 Role of neural crest cell in human face
  - Q. 7 Discuss in detail development changes of the soft tissue of the face
  - Q. 8 Write a note on Nasomaxillary complex
  - Q. 9 What are Growth hormones and their effect on craniofacial growth
  - Q. 10 Significance of Lateral pterygoid muscle in orthodontics

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**M. D. S. PART-II (2018 COURSE)**  
**(ORTHODONTICS & DENTOFACIAL ORTHOPEDICS): SUMMER-- 2022**  
**SUBJECT: PAPER-I: ORTHODONTIC HISTORY, CONCEPTS OF OCCLUSION AND**  
**ESTHETICS, CHILD AND ADULT PSYCHOLOGY, ETIOLOGY AND**  
**CLASSIFICATION OF MALOCCLUSION, DENTOFACIAL ANOMALIES,**  
**DIAGNOSTIC PROCEDURES AND TREATMENT PLANNING IN ORTHODONTICS,**  
**PRACTICE MANAGEMENT IN ORTHODONTIC**

Day : Saturday

Time : 09:00 AM-12:00 PM

Date : 3/9/2022

S-20248-2022

Max. Marks : 100

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat and labelled diagrams **WHEREVER** necessary.

**Long Essay Questions:**

- Q.1** Discuss the etiology of cleft lip and palate. Describe the various orthodontics procedures carried out in the management of cleft lip and palate. **(25)**
- Q.2** Methods of assessing facial asymmetry. **(25)**

**Short Essay Questions:**

- Q.3** Discuss the role of Splint in Temporomandibular Joint (TMJ) problems. **(10)**
- Q.4** Discuss self-correcting malocclusions. **(10)**
- Q.5** Diagnosis and management of Bolton's discrepancy. **(10)**
- Q.6** Discuss various parameters in lip analysis. **(10)**
- Q.7** Role of Growth spurts in orthodontic treatment planning. **(10)**

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**M. D. S. PART-II (2018 COURSE)**  
**(ORTHODONTICS & DENTOFACIAL ORTHOPEDICS): SUMMER- 2022**  
**SUBJECT: PAPER-II: CLINICAL ORTHODONTICS**

Day : Monday  
Date : 5/9/2022

**S-20249-2022**

Time : 09:00 AM-12:00 PM  
Max. Marks : 100

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**N.B.:**

- 1) All questions are **COMPULSORY**.
  - 2) Figures to the right indicate **FULL** marks.
  - 3) Draw neat and labelled diagrams **WHEREVER** necessary.
- 

**Long Essay Questions:**

- Q.1** Write the factors to be considered in finishing and detailing. (25)
- Q.2** Discuss Mini-implants as an anchorage in orthodontics. (25)

**Short Essay Questions:**

- Q.3** Versatility of the MBT Bracket system. (10)
- Q.4** Short note on: Class-II and Class-III elastics. (10)
- Q.5** Short note on: Accelerated orthodontics. (10)
- Q.6** Discuss the role of friction in orthodontics. (10)
- Q.7** Explain: Anchorage control in lingual orthodontics. (10)

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**M. D. S. PART-II (2018 COURSE)**  
**(ORTHODONTICS & DENTOFACIAL ORTHOPEDICS): SUMMER- - 2022**  
**SUBJECT: PAPER-III: DESCRIPTIVE AND ANALYSING TYPE QUESTION**

Day : Wednesday

Time : 09:00 AM-12:00 PM

Date : 7/9/2022

S-20250-2022

Max. Marks : 100

**N.B.:**

- 1) Answer **ANY TWO** of the following
- 2) Draw neat and labelled diagrams **WHEREVER** necessary.

- 
- |       |   |      |
|-------|---|------|
| Q.1   | Aligners in Orthodontics.   | (50) |
| <hr/> |   |      |
| Q.2   | Extraction Vs Non-Extraction Orthodontics treatment.  | (50) |
| <hr/> |   |      |
| Q.3   | What is systematic Review, Meta-Analysis and Randomized Clinical Trial (RCT)? Discuss their essentiality and Methodology. | (50) |

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MASTER OF DENTAL SURGERY (M.D.S.) (2018 COURSE)  
M.D.S. Part-I ORTHODONTICS & DENTOFACIAL ORTHOPEDICS : SUMMER :  
2023  
SUBJECT : BASIC SCIENCES

Day : Friday

Time : 09:30 AM-12:30 PM

Date : 15-12-2023

S-20247-2023

Max. Marks : 100

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the **RIGHT** indicate full marks.
- 3) Draw neat labeled diagrams **WHEREVER** necessary.

- |      |   |      |
|------|---|------|
| Q.1  | Write role of Thyroid hormone in growth and development.        | (10) |
| Q.2  | Describe the anatomy and physiology of Temporomandibular Joint. | (10) |
| Q.3  | Discuss the evolution of human mandible.                        | (10) |
| Q.4  | Role of Home Box genes in orthodontics.                         | (10) |
| Q.5  | Discuss Cognitive development of a growing child.               | (10) |
| Q.6  | Role of vitamins in growth and development.                     | (10) |
| Q.7  | Write a note on: Sterilization in Orthodontics.                 | (10) |
| Q.8  | Explain- Epigenetic factors.                                    | (10) |
| Q.9  | Explain- Annealing and cold working.                            | (10) |
| Q.10 | Explain-Lip morphology and malocclusion.                        | (10) |

MASTER OF DENTAL SURGERY (M.D.S.) (2018 COURSE)  
M.D.S. Part-II ORTHODONTICS & DENTOFACIAL ORTHOPEDICS : SUMMER : 2023  
SUBJECT : PAPER - I

Day : Monday

Time : 09:30 AM-12:30 PM

Date : 21-08-2023

S-20248-2023

Max. Marks : 100

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat and labelled diagrams **WHEREVER** necessary.

**Long Essay Questions:**

- Q.1 Discuss recent advances in Diagnostic Aids. (25)
- Q.2 What is Obstructive sleep apnea? Write in detail the etiology, diagnosis and management of the same. (25)

**Short Essay Questions:**

- Q.3 Psychological state of an adult patient undergoing orthodontic treatment. (10)
- Q.4 Evaluation of smile in orthodontic treatment planning. (10)
- Q.5 Classify Diagnostic Aids. Explain Kesling's diagnostic setup. (10)
- Q.6 Write short notes on: Buccal Corridors. (10)
- Q.7 Explain: Envelop of Discrepancies. (10)

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MASTER OF DENTAL SURGERY (M.D.S.) (2018 COURSE)  
M.D.S. Part-II ORTHODONTICS & DENTOFACIAL ORTHOPEDICS : SUMMER : 2023  
SUBJECT : PAPER - II

Day : Wednesday  
Date : 23-08-2023

S-20249-2023

Time : 09:30 AM-12:30 PM  
Max. Marks : 100

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat and labelled diagrams **WHEREVER** necessary.

Long Essay Questions:

- Q.1 Discuss the 'Surgery First' approach in orthognathic surgeries. (25)
- Q.2 Discuss the etiology differential diagnosis and management of facial asymmetry. (25)

Short Essay Questions:

- Q.3 Discuss Biomechanics and Design of various types of Torquing auxiliaries in Begg's technique. (10)
- Q.4 Discuss the role of orthodontics as an adjunct to periodontal therapy. (10)
- Q.5 Write note on: Nasoalveolar molding. (10)
- Q.6 Explain: Growth consideration in planning retention. (10)
- Q.7 Write not on: External Root resorption. (10)

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MASTER OF DENTAL SURGERY (M.D.S.) (2018 COURSE)  
M.D.S. Part-II ORTHODONTICS & DENTOFACIAL ORTHOPEDICS : SUMMER : 2023  
SUBJECT : PAPER - III

Day : Friday

Time : 09:30 AM-12:30 PM

Date : 25-08-2023

S-20250-2023

Max. Marks : 100

N.B.:

- 1) Answer ANY TWO of the following
- 2) Draw neat and labelled diagrams WHEREVER necessary.

Q.1 Treatment considerations in Adult Orthodontics. (50)

Q.2 Evidence Based Orthodontics in Class-III cases. (50)

Q.3 Discuss the management of Medically compromised patients at you clinic. (50)

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