

MARCH 2007

[KQ 401]

Sub. Code : 2419

M.D.S. DEGREE EXAMINATION.

(Revised Regulations)

Branch V — Orthodontics

**(For candidates admitted from the Academic year
2004-05 onwards)**

**Paper III — BIO-MECHANICS, TISSUE CHANGES,
ORTHODONTIC TECHNIQUES AND TREATMENT
PLANNING**

Time : Three hours

Maximum : 100 marks

**Theory : Two hours and
forty minutes**

Theory : 80 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer ALL questions.

Draw suitable diagrams wherever necessary.

I. Essay questions :

1. Discuss Adult orthodontics. (20)
2. Discuss the methods of canine retraction on orthodontics. (15)
3. Discuss the problems of borderline cases and their management. (15)

II. Short notes :

(6 × 5 = 30)

- (a) Heat treatment of orthodontic wires.
 - (b) Lip bumpers.
 - (c) Steiner's treatment plan.
 - (d) Post treatment orthodontics.
 - (e) Implants in orthodontics.
 - (f) Apical root resorption consequent to orthodontic treatment.
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SEPTEMBER 2007

[KR 401]

Sub. Code : 2419

M.D.S. DEGREE EXAMINATION.

(Revised Regulations)

Branch V – Orthodontics

**(For candidates admitted from the Academic Year
2004-2005 onwards)**

**Paper III — BIO-MECHANICS, TISSUE CHANGES
ORTHODONTIC TECHNIQUES AND TREATMENT
PLANNING**

Time : Three hours

Maximum : 100 marks

**Theory : Two hours and
forty minutes**

Theory : 80 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer ALL questions.

I. Essay :

- 1. Management of deep overbite malocclusion. (20)**
- 2. Theories of tooth movement. (15)**
- 3. Various methods of Molar distalization. (15)**

II. Short notes :

(6 × 5 = 30)

- (a) Implants**
 - (b) Tandem Traction Bow appliance**
 - (c) Invisalign**
 - (d) Theorems of retention**
 - (e) T-loop**
 - (f) Properties of various magnets used in Orthodontics.**
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MARCH 2008

[KS 383]

Sub. Code : 2419

M.D.S. DEGREE EXAMINATION.

(Revised Regulations)

Branch V — Orthodontics

(For candidates admitted from the Academic Year
2004-2005 onwards)

Paper III — BIO-MECHANICS, TISSUE CHANGES
ORTHODONTIC TECHNIQUES AND TREATMENT PLANNING

Q.P. Code : 242419

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

- I. Essay : (2 × 20 = 40)
- (1) Surgical cephalometric analysis
 - (2) Management of open bite cases.
- II. Short notes : (6 × 10 = 60)
- (1) Role of genes in orthodontic treatment
 - (2) K-SIR
 - (3) Scintigraphy
 - (4) Divine proportion
 - (5) 10 × 2 anchorage system
 - (6) Retention and relapse.
-

September 2008

[KT 383]

Sub. Code: 2419

M.D.S. DEGREE EXAMINATION.

(Revised Regulations)

Branch V – ORTHODONTICS

(For Candidates admitted from 2004-2005 onwards)

**Paper III – BIO-MECHANICS, TISSUE CHANGES
ORTHODONTIC TECHNIQUES AND
TREATMENT PLANNING**

Q.P. Code : 242419

Time : Three hours

Maximum : 100 marks

Draw suitable diagram wherever necessary.

Answer ALL questions.

I. Essay questions :

(2 X 20 = 40)

1. Discuss the theories of bone formation and resorption and changes in the periodontal ligament during orthodontic tooth movement.
2. Compare the mechanism of bite opening achieved by the Beggs appliance and pre adjusted edgewise appliance.

II. Write short notes on :

(6 X 10 = 60)

1. T – loop.
 2. Utility arch.
 3. Effects of functional regulator II.
 4. Frictionless canine retraction.
 5. Combination anchorage technique.
 6. Ceramic bracket.
-

March 2009

[KU 383]

Sub. Code: 2419

M.D.S. DEGREE EXAMINATION

Branch V – ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS

(Revised Regulations)

(For Candidates admitted from 2004 - 2005 onwards)

**Paper III – BIO-MECHANICS, TISSUE CHANGES
ORTHODONTIC TECHNIQUES AND TREATMENT PLANNING**

Q.P. Code : 242419

Time : Three hours

Maximum : 100 marks

Answer ALL questions

Draw suitable diagram wherever necessary

I. Essay questions : (2 x 20 = 40)

1. Discuss the principles and techniques of using fixed functional appliances for advancement of the mandible in skeletal and dental class II problems. Add a note on their utility over non-fixed appliances.
2. Discuss the diagnostic, pre and post surgical – orthodontic management of the adult severely prognathic patient in an orthodontic practice. Add a note on the complications, iatrogenic sequelae and long term surveillance of these patients.

II. Write short notes on : (6 x 10 = 60)

1. Short face syndrome.
2. Transverse alveolar discrepancies & distraction osteogenesis.
3. Secondary alveolar bone graft for cleft palate deformity.
4. Late incisor crowding and its clinical management.
5. Debonding of ceramic brackets.
6. Temporary Anchorage devices for maxillary incisor intrusion and retraction.

September 2009

[KV 383]

Sub. Code: 2419

M.D.S. DEGREE EXAMINATION

Branch V – ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS

(Revised Regulations)

(For Candidates admitted from 2004 - 2005 onwards)

**Paper III – BIO-MECHANICS, TISSUE CHANGES
ORTHODONTIC TECHNIQUES AND TREATMENT PLANNING**

Q.P. Code : 242419

Time : Three hours

Maximum : 100 marks

Answer ALL questions

Draw suitable diagram wherever necessary

I. Essay questions : (2 x 20 = 40)

1. Discuss the evolution, clinical usage and utility of self ligating orthodontic brackets. Add a note on the frictional features and treatment duration with self ligating brackets.
2. Enumerate and discuss the contemporary occlusal and gnathologic goals for finishing an orthodontic case. Add a note on how these factors impact retention and long term stability.

II. Write short notes on : (6 x 10 = 60)

1. Remineralisation of orthodontically demineralised enamel.
2. Designated torque versus delivered torque in preadjusted edgewise appliance.
3. Principles and utility of the pre-finish cephalogram.
4. Intra oral corrosion of metallic orthodontic appliance components.
5. Intra-oral distraction osteogenesis.
6. Nickel hypersensitivity and its clinical management.

March 2010

[KW 383]

Sub. Code: 2419

M.D.S. DEGREE EXAMINATION

Branch V – ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS

(Revised Regulations)

(For Candidates admitted from 2004 - 2005 onwards)

**Paper III – BIO-MECHANICS, TISSUE CHANGES
ORTHODONTIC TECHNIQUES AND TREATMENT PLANNING**

Q.P. Code : 242419

Time : Three hours

Maximum : 100 marks

Answer ALL questions

Draw suitable diagram wherever necessary

I. Essay questions : (2 x 20 = 40)

1. Mandibular pragnathic appliances.
2. Frictionless mechanics orthodontics.

II. Write short notes on : (6 x 10 = 60)

1. Long face syndrome.
2. Residual composite removal after debonding.
3. Orthodontic bracket recycling.
4. Implant as an anchorage.
5. Inter canine distance in orthodontic treatment planning.
6. Nano technology in orthodontics.

October 2011

[KZ 383]

Sub. Code: 2419

M.D.S. DEGREE EXAMINATION

BRANCH V – ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS

**PAPER III – BIO-MECHANICS, TISSUE CHANGES ORTHODONTIC
TECHNIQUES AND TREATMENT PLANNING**

Q.P. Code : 242419

**Time : 3 hours
(180 Min)**

Maximum : 100 marks

Answer ALL questions in the same order.

I. Elaborate on :

	Pages (Max.)	Time (Max.)	Marks (Max.)
1. Temporary Anchorage Device; evolution, clinical uses and design.	6	18	10
2. Lingual orthodontics. Add a note on its indications and limitations.	6	18	10
3. Recent advances in functional appliances.	6	18	10
4. Active vs. Passive self ligating brackets.	6	18	10
5. Torque prescriptions in fixed appliances.	6	18	10
6. Method employed in recording the centric relation position in a patient.	6	18	10
7. Rapid maxillary expansion.	6	18	10
8. Finishing and detailing in orthodontics.	6	18	10
9. Stage III in Begg technique.	6	18	10
10. Pathology of Root resorption and methods of prevention.	6	18	10

[LA 383]

April 2012

Sub. Code: 2419

**M.D.S. DEGREE EXAMINATION
BRANCH V – ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS
PAPER III – BIO-MECHANICS, TISSUE CHANGES ORTHODONTIC
TECHNIQUES AND TREATMENT PLANNING**

Q.P. Code : 242419

**Time : 3 hours
(180 Min)**

Maximum : 100 marks

Answer ALL questions in the same order.

	Pages (Max.)	Time (Max.)	Marks (Max.)
1. Orthodontic management of patients with systemic disease.	7	18	10
2. Cephalometric diagnosis for functional appliance therapy.	7	18	10
3. Herbst appliance – discuss indications, timing and changes associated.	7	18	10
4. Differentiate the diagnosis and treatment planning strategies between camouflage and surgical treatment for skeletal problems.	7	18	10
5. Describe the role of head gears in orthodontics.	7	18	10
6. Diagnosis of transverse malocclusion and differentiate the orthopedic, orthodontic and surgical management of the same.	7	18	10
7. Tip edge mechanics.	7	18	10
8. Different theories of tooth movement.	7	18	10
9. Extraction versus non-extraction treatment.	7	18	10
10. Management of periodontally compromised patients.	7	18	10

[LB 383]

OCTOBER 2012

Sub. Code: 2419

M.D.S. DEGREE EXAMINATION
BRANCH V – ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS
PAPER III – BIO-MECHANICS, TISSUE CHANGES ORTHODONTIC
TECHNIQUES AND TREATMENT PLANNING

Q.P. Code : 242419

Time : 3 hours
(180 Min)

Maximum : 100 marks

Answer ALL questions in the same order.

	Pages (Max.)	Time (Max.)	Marks (Max.)
1. Mendelians laws of inheritance and twin studies.	7	18	10
2. COGS analysis.	7	18	10
3. Cognitive theory.	7	18	10
4. Orthodontic office design.	7	18	10
5. Anchorage and it control.	7	18	10
6. Adult orthodontics.	7	18	10
7. Bio-progressive therapy.	7	18	10
8. Refined Begg technique.	7	18	10
9. Torquing auxiliaries.	7	18	10
10. Self ligating brackets.	7	18	10

[LC 383]

APRIL 2013

Sub. Code: 2419

M.D.S. DEGREE EXAMINATION

BRANCH V – ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS

PAPER III – BIO-MECHANICS, TISSUE CHANGES ORTHODONTIC

TECHNIQUES AND TREATMENT PLANNING

Q.P. Code : 242419

Time : 3 hours

Maximum : 100 marks

(10x10=100)

1. Self ligating brackets; evolution and proposed core advantages.
2. Distraction osteogenesis.
3. Skeletal maturity indicators.
4. Fixed functional appliances.
5. Impacted canines and its treatment.
6. Skeletal anchorage system.
7. Open bite; diagnosis and management.
8. Invisalign; case selection and armamentarium.
9. Frictionless mechanics.
10. Different Bracket System used in orthodontics.

M.D.S. DEGREE EXAMINATION
BRANCH V – ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS
PAPER III – BIO-MECHANICS, TISSUE CHANGES ORTHODONTIC
TECHNIQUES AND TREATMENT PLANNING

Q.P. Code : 242419

Time: Three Hours

Maximum: 100 marks

Answer ALL questions in the same order.

I. Elaborate on :

(10 x 10 = 100)

1. Deleterious effect of orthodontic force.
2. Distalisation of molars
3. Hysteresis
4. Final settling of teeth in orthodontics.
5. Magnets in orthodontics
6. Anchorage loss in straight wire technique
7. Root paralleling mechanism in various techniques.
8. Temporary skeletal anchorage systems
9. Distraction osteogenesis
10. Alignment of asymmetric crowding.

[LE 383]

APRIL 2014

Sub. Code: 2419

M.D.S. DEGREE EXAMINATION

BRANCH V – ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS

**PAPER III – BIO-MECHANICS, TISSUE CHANGES ORTHODONTIC
TECHNIQUES AND TREATMENT PLANNING**

Q.P. Code : 242419

Time : 3 hours

Maximum : 100 marks

(10x10=100)

1. Grummon's analysis.
2. Molar distalisation techniques.
3. Magnets in orthodontics.
4. Pre surgical orthodontics.
5. Natural head position.
6. Gnathostatic occlusion.
7. Maxillary retraction and intrusion splints.
8. Bio progressive therapy.
9. Retention appliances.
10. Iatrogenic effects of orthodontic treatment.

[LF 383]

OCTOBER 2014

Sub. Code: 2419

M.D.S. DEGREE EXAMINATION

BRANCH V – ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS

**PAPER III – BIO-MECHANICS, TISSUE CHANGES ORTHODONTIC
TECHNIQUES AND TREATMENT PLANNING**

Q.P. Code : 242419

Time : 3 Hours

Maximum : 100 Marks

(10 x 10 = 100)

1. Discuss about the various treatment modalities of open bite pertaining to its etiology.
2. Discuss the biomechanical concerns during orthodontic treatment in periodontally compromised patients and for prosthetic restoration.
3. What is Deprogramming splint? Write about its types, indications and construction?
4. Management of congenitally missing lateral incisor.
5. Write in detail about the Tissue response to various orthodontic forces.
6. Elucidate in detail about frictionless mechanics; add a note about the biomechanics of Opus-loop.
7. Discuss in detail etiology and management of transverse discrepancies. Write a note on surgically assisted rapid palatal expansion.
8. Discuss in detail the management of deep bite in relation to the various etiological factors and clinical features.
9. Lasers in Orthodontics.
10. Enumerate the varieties of disinfection procedures and sterilization of orthodontic instruments and materials. Add a note on Recycling Procedures.

M.D.S. DEGREE EXAMINATION

BRANCH V – ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS

**PAPER III – BIO-MECHANICS, TISSUE CHANGES ORTHODONTIC
TECHNIQUES AND TREATMENT PLANNING**

Q.P. Code : 242419

Time: Three Hours

Maximum: 100 marks

(10 x 10 = 100)

1. Discuss the various needs for adult Orthodontics.
2. Discuss about Anchorage conservation modalities for various type of tooth movement.
3. Explain Sectional mechanics. Add a note on utility arches.
4. White spot lesions. Etiology and Management.
5. Obstructive sleep apnea etiology and management.
6. Various methodologies advocated to manage canine impaction.
7. Orthodontic Camouflage treatment.
8. Describe about the various treatment modalities with orthopedic forces for vertical and sagittal discrepancies.
9. Enumerate about the hypersensitive reactions in orthodontics, its management and alternatives.
10. What are clear aligners? Discuss about its advantages and limitations.

[LH 383]

OCTOBER 2015

Sub. Code: 2419

M.D.S. DEGREE EXAMINATION

BRANCH V – ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS

**PAPER III – BIO-MECHANICS, TISSUE CHANGES, ORTHODONTIC
TECHNIQUES AND TREATMENT PLANNING**

Q.P. Code : 242419

Time : 3 Hours

Maximum : 100 Marks

(10 x 10 = 100)

1. Biomechanics of tooth movement.
2. Root resorptions caused by orthodontics.
3. Roth Vs MBT techniques.
4. Orthodontic motivational psychology.
5. Fixed functional appliances.
6. Distraction osteogenesis.
7. Finite element studies.
8. Obstructive sleep apnoea.
9. Chromosomal aberrations.
10. Soft tissue cephalometric analyses.

[LK 383]

JUNE 2017

Sub. Code: 2419

M.D.S DEGREE EXAMINATION
(For the Candidates Admitted up to the Academic Year 2012-2013 only)

BRANCH V – ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS

**PAPER III – BIO-MECHANICS, TISSUE CHANGES ORTHODONTIC
TECHNIQUES AND TREATMENT PLANNING**

Q.P. Code : 242419

Time : 3 Hours

Maximum : 100 Marks

(10 x 10 = 100)

1. Refinements in Begg.
2. Smile Arc.
3. Explain about 'T' Loop.
4. Naso-Alveolar molding.
5. Bio progressive therapy.
6. Digital photography in orthodontics.
7. Role of Gnathology in orthodontics.
8. Enumerate the advantages and dis-advantages of invisalign treatment.
9. Explain about MBT principles.
10. Finishing and detailing of occlusion.
