

[LO 521]

**MAY 2019**

**Sub. Code: 2521**

**M.D.S DEGREE EXAMINATION**  
**(For the Candidates Admitted from the Academic Year 2018-2019 onwards)**

**PART – I**

**BRANCH V – ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS**

**PAPER I – APPLIED BASIC SCIENCES**

***Q.P. Code: 242521***

**Time: 3 Hours**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(10 x 10 = 100)**

1. Developmental Defects of face.
2. Sterilization and Disinfection in Orthodontics.
3. Buccinator Mechanism.
4. Newer Orthodontic Wires.
5. Trisomy 21.
6. Muscles of Facial Expression and Smile Line.
7. Vitamin D and its Role in Orthodontics.
8. Drugs and its involvement in Orthodontic Tooth Movement.
9. Dental caries and White Spot Lesion.
10. Biostatistics for the Orthodontist.

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[LP 521]

**OCTOBER 2019**

**Sub. Code: 2521**

**M.D.S DEGREE EXAMINATION**  
**(For the Candidates Admitted from the Academic Year 2018-2019 onwards)**

**PART – I**

**BRANCH V – ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS**

**PAPER I – APPLIED BASIC SCIENCES**

***Q.P. Code: 242521***

**Time: 3 Hours**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(10 x 10 = 100)**

1. Antisialogogues in orthodontics.
2. Development and management of cleft lip and palate in brief.
3. Effects of nutrition in growth and development of the face.
4. Functions of muscles and ligaments related to TMJ.
5. Pathway of Dental pain.
6. Prostaglandins and orthodontic tooth movement.
7. Nano applications in orthodontics.
8. Randomized control Trials.
9. Calcium Metabolism.
10. Bioforce archwires.

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[LQ 521]

**NOVEMBER 2020  
(MAY 2020 SESSION)**

Sub. Code: 2521

**M.D.S DEGREE EXAMINATION  
(For the Candidates Admitted from the Academic Year 2018-2019 onwards)**

**PART – I**

**BRANCH V – ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS**

**PAPER I – APPLIED BASIC SCIENCES**

***Q.P. Code: 242521***

**Time: 3 Hours**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(10 x 10 = 100)**

1. Role of Fluorides in orthodontics.
2. Effects of Adenoids in Oro Facial Functions and their Management.
3. Primary and Secondary cartilages.
4. Elastomers in orthodontics.
5. NSAIDs and its role in orthodontics.
6. Transmission and prevention of HIV in Orthodontic Practice.
7. Pathway of Dental pain.
8. Tests of significance.
9. “Difficult patients”.
10. Optiflex Archwires.

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[MDS 0321]

**MARCH 2021  
(OCTOBER 2020 SESSION)**

Sub. Code: 2521

**M.D.S DEGREE EXAMINATION  
(For the Candidates Admitted from the Academic Year 2018-2019 onwards)**

**PART – I**

**BRANCH V – ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS**

**PAPER I – APPLIED BASIC SCIENCES**

***Q.P. Code: 242521***

**Time: 3 Hours**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(10 x 10 = 100)**

1. Muscles and Ligaments Related to TMJ.
2. Stainless Steel and Nitinol.
3. Post-Natal Growth of Mandible.
4. Fluoride in Orthodontics.
5. Malnutrition-as a Causative Factor for Malocclusion.
6. Role of Prostaglandins in Orthodontic Tooth Movement.
7. Role of Teratogens in Malocclusion.
8. Regional Acceleratory Phenomenon (RAP).
9. Twin Studies.
10. Significance of “P” value and its Inference.

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**THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY**

**[MDS 0322]**

**MARCH 2022  
(MAY 2021 SESSION)**

**Sub. Code: 2521**

**M.D.S DEGREE EXAMINATION  
(For the Candidates Admitted from the Academic Year 2018-2019 onwards)**

**PART – I**

**BRANCH V – ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS**

**PAPER I – APPLIED BASIC SCIENCES**

***Q.P. Code: 242521***

**Time: 3 Hours**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(10 x 10 = 100)**

1. Retrodiscal Pad.
2. Waldeyer's Ring.
3. Calcium Metabolism.
4. Pathway of Dental Pain.
5. Cold Sterilization.
6. Growth & Development of Cranial Base Structures.
7. Randomised Clinical Trials.
8. Homeobox Genes.
9. Types and Properties of Nickel Titanium Wires.
10. Nano Application in Orthodontics.

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**THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY**

**[MDS 0522]**

**MAY 2022  
(OCTOBER 2021 SESSION)**

**Sub. Code: 2521**

**M.D.S DEGREE EXAMINATION  
(For the Candidates admitted from the Academic Year 2018-2019 onwards)**

**FIRST YEAR**

**PART – I**

**BRANCH V – ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS**

**PAPER I – APPLIED BASIC SCIENCES**

***Q.P. Code: 242521***

**Time: 3 Hours**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(10 x 10 = 100)**

1. Muscles and ligaments related to TMJ.
2. Hyoid bone and tongue posture.
3. Role of Electromyography.
4. Role of Parathormone and its clinical implications.
5. Role of Drugs in “RAP”.
6. Anti Sialogogues.
7. Data collection in orthodontics.
8. Genetic polymorphism.
9. Stainless steel and Nitinol.
10. Nano technology in orthodontics.

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**THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY**

**[MDS 0223]**

**FEBRUARY 2023  
(OCTOBER 2022 EXAM SESSION)**

**Sub. Code: 2521**

**M.D.S. DEGREE EXAMINATION  
(For the Candidates admitted from the Academic Year 2018-2019 onwards)**

**FIRST YEAR**

**PART – I**

**BRANCH V – ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS**

**PAPER I – APPLIED BASIC SCIENCES**

***Q.P. Code: 242521***

**Time: 3 Hours**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(10 x 10 = 100)**

1. Discuss in brief various Congenital Anomalies Causing Malocclusion.
2. Temporomandibular joint movements and their significance to Normal Occlusion.
3. Role of Genetics in Malocclusion.
4. Vitamin D Synthesis.
5. Sterilization in Orthodontics.
6. Development of Speech and its difficulties related to Malocclusion.
7. Stem Cells and their Significance.
8. Aesthetic Arch Wires in Orthodontics
9. Histology of Bone.
10. Role of Biostatistics in Orthodontics.

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**THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY**

**[MDS 0723]**

**JULY 2023  
(MAY 2023 EXAM SESSION)**

**Sub. Code: 2521**

**M.D.S. DEGREE EXAMINATION  
(For the Candidates admitted from the Academic Year 2018-2019 onwards)**

**FIRST YEAR**

**PART – I**

**BRANCH V – ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS**

**PAPER I – APPLIED BASIC SCIENCES**

***Q.P. Code: 242521***

**Time: 3 Hours**

**Maximum: 100 Marks**

**I. Elaborate on: (10 x 10 = 100)**

1. Development and Anatomy of TMJ.
2. Muscles of Facial Expression.
3. Role of Vitamin D in Orthodontics.
4. Cleido-Cranial Dysplasia.
5. Arch Wires and its significance.
6. Non Steroidal Anti Inflammatory Drugs.
7. Meta-Analysis and Orthodontic Evidence Based Clinical Practice.
8. Chromosomal Aberrations.
9. Sensitization and Stabilization.
10. Impression Materials Used in Orthodontics.

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**THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY**

**[MDS 1223]**

**DECEMBER 2023**

**Sub. Code: 2521**

**M.D.S DEGREE EXAMINATION**

**FIRST YEAR**

**PART – I**

**BRANCH V – ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS**

**PAPER I – APPLIED BASIC SCIENCES**

***Q.P. Code: 242521***

**Time: 3 Hours**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(10 x 10 = 100)**

1. Esthetic arch wires.
2. Genetic counseling.
3. Sterilization in Orthodontics.
4. Role of Parathormone in Orthodontics.
5. Role of Tongue in Orthodontics.
6. Meta analysis.
7. Nasoalveolar Molding.
8. Bone Physiology.
9. Laser etching.
10. Meckle's Cartilage.

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**THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY**

**[MDS 1024]**

**OCTOBER 2024**

**Sub. Code: 2521**

**M.D.S DEGREE EXAMINATION**

**(For the candidates admitted from the Academic Year 2018-2019 onwards)**

**FIRST YEAR**

**PART – I**

**BRANCH V – ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS**

**PAPER I – APPLIED BASIC SCIENCES**

***Q.P. Code: 242521***

**Time: 3 Hours**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(10 x 10 = 100)**

1. Spheno-occipital synchondrosis.
2. Fluorides in Dental Caries.
3. Cleft Lip and Palate.
4. Sterilization in Orthodontics.
5. Developmental defects of Face.
6. Scammon growth curve.
7. Biostatistics in Orthodontics.
8. Growth Hormone.
9. Pathway of Dental Pain.
10. Niti Wires.

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**THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY**

**[MDS 0525]**

**MAY 2025**

**Sub. Code: 2521**

**M.D.S DEGREE EXAMINATION**

**(For the candidates admitted from the Academic Year 2018-2019 onwards)**

**FIRST YEAR**

**PART – I**

**BRANCH V – ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS**

**PAPER I – APPLIED BASIC SCIENCES**

***Q.P. Code: 242521***

**Time: 3 Hours**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(10 x 10 = 100)**

1. Neural Crest cells.
2. Histology of Bone.
3. Prenatal Development of Maxilla.
4. Stem cells and their significance.
5. Development of tongue.
6. Twin Studies.
7. Primary and Secondary Cartilage.
8. Role of Fluorides.
9. Bioforce Archwires.
10. Essential amino Acids.

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**THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY**

**[MDS 1025]**

**OCTOBER 2025**

**Sub. Code: 2521**

**M.D.S DEGREE EXAMINATION**

**(For the candidates admitted from the Academic Year 2018-2019 onwards)**

**FIRST YEAR**

**PART – I**

**BRANCH V – ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS**

**PAPER I – APPLIED BASIC SCIENCES**

***Q.P. Code: 242521***

**Time: 3 Hours**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(10 x 10 = 100)**

1. Muscles of Facial Expression.
2. Prenatal Development of mandible.
3. Growth Hormone and its regulation.
4. Role of Fluorides in Orthodontics.
5. Ascorbic acid and Vitamin D.
6. Cleft Lip and Palate.
7. Biostatistics in Orthodontics.
8. Functional Occlusion.
9. Buccinator Mechanism.
10. Pathway of Dental pain.

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