

**MANAV RACHNA INTERNATIONAL INSTITUTE OF RESEARCH & STUDIES**  
(Deemed to be University under section 3 of the UGC Act 1956)

**Ph.D ADMISSION TEST (MR-PAT)**

**Ph.D. in Pediatric & Preventive Dentistry**

**Module 1: Psychological Development & Behavior Management**

- 1.1 Emotional Development of child
- 1.2 Child Psychology
- 1.3 Behaviour Sciences and its applicability in clinics
- 1.4 Behaviour Management
- 1.5 Sedation & Anaesthesia

**Module 2: Development of a child**

- 2.1 Stages of Human Growth and Development
- 2.2 Milestones and growth Assessment
- 2.3 Development of Dentition
- 2.4 Development of Occlusion

**Module 3: Dental Caries & Preventive Approches**

- 3.1 Caries Risk Factors and assessment, ICDAS
- 3.2 Early Diagnosis of Caries
- 3.3 Early Childhood Caries
- 3.4 Saliva ad Oral Health
- 3.5 Infant Oral Health
- 3.6 Dental Home & Age one dental Visit
- 3.7 Fluorides and other remineralizing agents

**Module 4: Pediatric Restorative Dentistry & Pediatric Endodontics**

- 4.1 Principles & concepts of cavity preparation
- 4.2 MID
- 4.3 Commonly used materials and techniques
- 4.4 MIH
- 4.5 Semi-permanent materials
- 4.6 SMART materials
- 4.7 Pulp-dentin Complex, Pulp pathologies and Diagnosis
- 4.8 Vital Pulp Therapy & Non Vital Pulp Therapy
- 4.9 Regenerative Endodontics

**Module 5: Preventive & Interventional Orthodontics**

- 5.1 Orthodontic Prevention
- 5.2 Early Orthodontic Interventions
- 5.3 Oral Habits
- 5.4 Functional Occlusion

**Module 6: Special Care Dentistry**

- 6.1 management of Developmentally Disabled Child
- 6.2 Management of Medically Compromised Child
- 6.3 Cleft Lip and palate
- 6.4 Sleep Disordered Breathing in children

**Module 7: Traumatic Injuries**

- 7.1 Trauma & Orofacial Injuries in children
- 7.2 Jaw fractures and management
- 7.3 Anterior tooth trauma
- 7.4 primary tooth injuries
- 7.5 medical Emergencies in children

**Module 8: Methods & techniques on Horizon**

- 8.1 Sports Dentistry
- 8.2 Stem Cells in Pediatric Dentistry
- 8.3 Laser in Pediatric Dentistry
- 8.4 Recent advances in Endodontics
- 8.5 SMART materials
- 8.6 Forensic Pedodontics

**Suggested Readings:**

1. Paediatric Dentistry : Shobha Tandon, Paras Medical Publisher, 2018, 3<sup>rd</sup> Edition
2. Mc Donalds and Avery Dentistry for Child & Adolescents : M S Muthu & N Sivakumar, Elsevier, 2011, 1<sup>st</sup> South Asia Edition
3. Handbook of Nitrous Oxide and Oxygen sedation – Morris S. Clark, Elsevier, 2008, 3<sup>rd</sup> Edition
4. Cohen's Pathway of The Pulp- Elsevier, Hargreaves, L. H. ,2020, 12<sup>th</sup> Edition
5. Weblinks - <https://www.aapd.org/research/oral-health-policies--recommendations/>