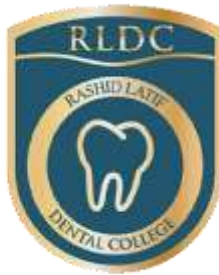




PRE-CLINICAL OPERATIVE DENTISTRY

LOG BOOK
BDS 3rd Year





Dr. HANNA ABDUL MAJEED

BDS, FCPS

Professor Operative Dentistry
Course Director of Preclinical Operative Dentistry
Rashid Latif Dental college

"Empowering Your Quest for Dental Excellence"

Dear Students,

Welcome to this pivotal chapter in your BDS academic journey! I'm delighted to be your Course Director and guide you through the fundamentals of Pre-Clinical Operative Dentistry. This foundational phase is crucial for your future success, and I encourage you to embrace its challenges, ask questions, and let your curiosity fuel your learning. The preclinical skills you develop here will lay the groundwork for your transformation into exceptional dental professionals. Stay engaged, take an active role in your learning, and enjoy the process. I'm committed to supporting you every step of the way, so don't hesitate to reach out whenever you need guidance or assistance."

Best regards.

INTRODUCTION TO PRE-CLINICAL OPERATIVE DENTISTRY

"Preclinical Operative Dentistry is a cornerstone of dental education, focusing on the diagnosis, treatment planning, and hands-on practice of restorative procedures. This foundational stage prepares students for their preclinical experience before working with patients, covering essential topics like dental materials, cavity preparation, Restoration placement, and conservative tooth Restoration techniques.

Students delve into the properties and applications of various restorative materials, including amalgam, composite resins, and glass ionomer cements. They also study tooth anatomy, dental instruments, and ergonomics to master the precise skills required for operative dentistry.

The preclinical curriculum features simulated laboratory exercises on artificial teeth, providing hands-on training in cavity preparation, Restoration placement, and proper isolation and moisture control techniques. These exercises equip students with the necessary skills for accurate restorative procedures.

Additionally, Preclinical Operative Dentistry instills principles of minimally invasive dentistry, emphasizing preservation of healthy tooth structure and prevention of further damage. Students also learn about restorative dentistry principles, crucial for successful bonding of materials to tooth structure.

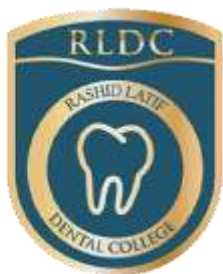
Ultimately, Preclinical Operative Dentistry provides a comprehensive theoretical and practical foundation for future dental practice, imparting knowledge, psychomotor skills, and preclinical expertise necessary for delivering high-quality restorative care. The curriculum prioritizes patient comfort, safety, and long-term oral health, aligning closely with foreign dental exam requirements and preparing students for success."

Brief Introduction of Phantom Lab (RLDC)

Phantom Lab is well equipped with 40 Dental simulators, with attachment of phantom jaws and highly advanced Audio-visual facility for conducting pre-clinical training sessions. Our phantom lab is loaded with all the modern dental instruments and dental materials for pre-clinical demonstrations.

Well trained faculty and supporting staff is always available in phantom lab to cater all the needs of students working in phantom lab

Serial No.	Faculty	Designation
1	Dr. Hanna Abdul Majeed	Professor
2	Dr. Mahrukh Anwar	Assistant Professor
3	Dr. Qurat-ul-ain Manzoor	Assistant Professor
4	Dr. Zahra Malik	Demonstrator
5	Dr. Huzaifa Munawar	Demonstrator
6	Dr. Zunnaira Saqi	Demonstrator



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Here

CERTIFICATE 3rd YEAR BDS

It is certified that Mr. / Miss:

Son/ Daughter of:

Has completed following tasks related to Pre-Clinical Operative Dentistry in 3rd year BDS from

_____ to _____.

1. Instrument identification

☐

2. Rubber Dam Application

☐

3. Pits and Fissure Sealant

☐

4. Class I Cavity preparation for premolars

☐

5. Liners and Bases Application

☐

6. Class I Amalgam Restoration

☐

7. Class I Cavity Preparation and Amalgam Restoration for Maxillary Molars

☐☐

- 8. Class I Cavity Preparation and Amalgam Restoration for Mandibular Molars
- 9. Class II Cavity Preparation for Amalgam Restoration in Maxillary and Mandibular Molars ☐
- 10. Application of matrix bands and retainers ☐
- 11. Class II Amalgam Restoration for Maxillary and Mandibular Molars ☐
- 12. Class III Cavity Preparation and Composite Restoration ☐
- 13. Class IV Cavity Preparation and Composite Restoration ☐
- 14. Class V Cavity Preparation and Composite Restoration ☐
- 15. Class VI Cavity Preparation and Composite Restoration ☐
- 16. Root Canal Treatment for Anterior Teeth ☐
- 17. Crown Preparation ☐

Signature In-charge Pre-Clinical Operative Dentistry

Instructions for Students

- Complete pre-clinical assessment for 3rd year BDS session will be done on this document.
- During the whole session of 3rd year BDS, each student has to perform all the tasks demonstrated by the teachers in the Phantom Head Lab.
- Students must have all the required instruments during the whole session.
- Students will be allotted dental simulators for their pre-clinical training.
- There will be regular practical tests during the whole session. These marks will be given appropriate weightage in the internal assessment.
- Logbook should be signed by their respective teachers (demonstrators'/ faculty members) on daily basis and it should be countersigned by Head of Department.
- Pre-clinical attendance in skill lab is mandatory (90 percent). Student will be held responsible for the consequences if failed to meet the above criteria.

Armamentarium

1. Hand Piece

- High speed hand piece

2. Rubber Dam Kit

3. Examination Set

- Mouth Mirror
- Dental Explorer
- Tweezer
- Periodontal probe

4. Filling Set

- Caries Excavator
- Gingival marginal trimmer
- Enamel hatchet
- Dycal applicator
- Glass slab
- Cement mixing spatula
- Plastic Instrument
- Mortar and pestle
- Amalgam gun
- Condenser (small and Medium)
- Burnisher (ball shaped, egg shaped and anatomical)
- Carver (Diamond shaped, Discoid-Cleoid and Hollen-Back carver)

5. Retainers

- Tofflemire with matrix band

6. Burs

- No. 245, No. 330, No. 169L
- Round Diamond bur
- Straight Fissure bur (small and medium)
- Tapered fissure bur
- Composite Finishing burs (Bullet, Dumbbell, Tapered)
- Inverted cone bur

- Crown Preparation Burs

7. Bur Holder

8. Endo Box

- K-Files (15-40, 45-80)
- Endo Z Bur
- Endo Ring

9. Phantom Jaw

LIST OF PRACTICALS

SR NO.	NAME OF PRACTICAL	CREDIT HOURS
1.	Introduction to dental operatory	1.5 hrs.
2.	Introduction to instruments used in cavity preparation	1.5hrs
3.	Methods of sterilization	3 hrs.
4.	Components of rubber dam and its application	3 hrs.
5.	Class I cavity preparation for amalgam on phantom teeth	6 hrs. (3x2)
6.	Class II cavity preparation for amalgam on phantom teeth	6 hrs. (3x2)
7.	Class III cavity preparation on phantom teeth	6hrs (3x2)
8.	Class IV cavity preparation on phantom teeth	6 hrs. (3x2)
9.	Root canal treatment on anterior block tooth	6 hrs. (3x2)
10.	Root canal treatment on posterior block tooth	6 hrs. (3x2)
11.	Restorative procedure on primary tooth	3hrs
12.	Pulpotomy	3hrs
13.	Liners and bases-application	3 hrs.
14.	Techniques for application of matrix bands	3 hrs.
15.	Techniques for amalgam manipulation and insertion, carving and polishing	3 hrs.
16.	Cavity preparation for composite	3hrs
17.	Composites –the acid etching technique	3 hrs.
18.	Sandwich technique	3hrs
19.	Glass ionomer manipulation and technique	3 hrs.
20.	Crown preparation anterior tooth	6 hrs.
TOTAL	NO. OF CREDIT HOURS	99 hrs.

Checking Criteria

Class I & II Amalgam Restoration

No.	Clinical Steps	Criteria	Marks
1	Patient seating and instrument set-up	Chair positioning	1
2	Cavity preparation	Based on extent of the lesion and selection of material	7
3	Rubber dam	No voids/leaks	3
4	Lining/cement	Proper technique	2
5	Material mixing, matrix, wedge	Proper ratio	3
6	Restoration	Restore anatomy/contact	3
7	Carving and polish	Contours restored	2
8	Table viva	Procedure discussion	2
	Total		25

Class III & IV Composite Restoration

No.	Clinical Steps	Criteria	Marks
1	Patient seating and instrument set-up	Positioning	1
2	Cavity prep	Margins, walls	7
3	Rubber dam	Proper placement	3
4	Matrix & wedge	Proper adaptation	3
5	Shade selection	Chroma, hue	1
6	Filling	Restore contact	3
7	Polishing	Smooth finish	3
8	Table viva	Procedure discussion	2
	Total		25

Root Canal Treatment

No.	Clinical Steps	Criteria	Marks
1	Patient seating and tray set-up	Positioning	1
2	Rubber dam	Seal	3
3	Access cavity	Tooth anatomy	3
4	Canal exploration	Locate canals	3
5	Working length	Radiographs	3
6	Instrumentation	Cleaning shaping	2
7	Obturation	Seal	3
8	Evaluation	No voids	3
9	Table viva	Discussion	2
	Total		25

Crown Preparation

No.	Clinical Steps	Criteria	Marks
1	Patient assessment	History, exam, Treatment Plan	1
2	Scrubbing	Infection control	1
3	Patient seating and Tray Set up	Positioning	1
6	Occlusal reduction	Crown type	3
7	Proximal reduction	Crown type	3
8	Facial reduction	Crown type	3
9	Lingual reduction	Crown type	3
10	Shade selection	Chroma	2
11	Margin finishing	Taper, margins	3
12	Occlusal finishing	Smooth	3
	Table viva	Discussion	2
	Total		25

Dental Instruments

Sr. #	Instrument identification	Grasp Techniques	Uses	Total Marks [45]	Obtained Marks	Remarks
1				3		
2				3		
3				3		
4				3		
5				3		
6				3		
7				3		
8				3		
9				3		
10				3		
11				3		
12				3		
13				3		
14				3		
15				3		

Signature _____

Date _____

Rubber Dam Application

Sr. #	Components	Grades	Remarks
1	Isolated tooth		
2	Selection of retainer(s)/clamp(s)		
3	Orientation of rubber dam sheet		
4	Tear or inappropriate holes in the sheet		
5	Tying of floss		
6	Length of Floss used for tying to the Retainer(s) (Clamps		
7	Folds or Overstretching of Rubber Dam in between teeth		
8	Adaption of Rubber Dam at Cervical Region of Teeth		
9	Inversion of Rubber Dam at Cervical Region of Teeth		
10	Rubber Dam Adaptation on teeth with Retainers (Clamps)		

Signature _____

Date _____

Pits and Fissure Sealants Application

Sr. #	Pit and Fissure Sealants		Max. Marks [10]	Obtained Marks	Remarks
	Components	Description			
1	Etch	Etchant restricted to fissures/ proper etching time observed	3		
2	Wash/Dry	Proper washing time observed/ no remnants after washing	1		
3	Sealant Application	Sealants not extending on cuspal inclines/ no bubbles or voids	3		
4	Curing	Color changed observed/ curing light secured	2		
5	High spot removal	Checking high spot by using articulating paper	1		

Signature _____

Date _____

Class I Cavity (Premolars)

No.	Clinical Steps	Criteria	Total Marks	Marks Obtained
1	Patient seating and instrument set-up	Chair positioning	1	
2	Cavity preparation	Based on extent of the lesion and selection of material	7	
3	Rubber dam	No voids/leaks	3	
4	Lining/cement	Proper technique	2	
5	Material mixing, matrix, wedge	Proper ratio	3	
6	Restoration	Restore anatomy/contact	3	
7	Carving and polish	Contours restored	2	
8	Table viva	Procedure discussion	2	
	Total		25	

Signature _____

Date _____

Liners and Bases Application

Sr. #	LINERS AND BASES		Total marks [10]	Obtained Marks	Remarks
	Components	Description			
1	Choice of material	GIC, Zinc Phosphate, RMGIC, Setting calcium hydroxide (Dycal)	2		
2	Material manipulation	Consistency of mixed material in dough stage	3		
3	Material placement	No voids or smearing on walls	3		
4	Thickness of liner	0.5mm	1		
5	Thickness of base	0.75-1mm	1		

Signature _____

Date _____

Class I Amalgam (Premolars)

No.	Clinical Steps	Criteria	Total Marks	Marks Obtained
1	Patient seating and instrument set-up	Chair positioning	1	
2	Cavity preparation	Based on extent of the lesion and selection of material	7	
3	Rubber dam	No voids/leaks	3	
4	Lining/cement	Proper technique	2	
5	Material mixing, matrix, wedge	Proper ratio	3	
6	Restoration	Restore anatomy/contact	3	
7	Carving and polish	Contours restored	2	
8	Table viva	Procedure discussion	2	
	Total		25	

Signature _____

Date _____

Class I Cavity (Molars)

No.	Clinical Steps	Criteria	Total Marks	Marks Obtained
1	Patient seating and instrument set-up	Chair positioning	1	
2	Cavity preparation	Based on extent of the lesion and selection of material	7	
3	Rubber dam	No voids/leaks	3	
4	Lining/cement	Proper technique	2	
5	Material mixing, matrix, wedge	Proper ratio	3	
6	Restoration	Restore anatomy/contact	3	
7	Carving and polish	Contours restored	2	
8	Table viva	Procedure discussion	2	
	Total		25	

Signature _____

Date _____

Class I Amalgam (Molars)

No.	Clinical Steps	Criteria	Total Marks	Marks Obtained
1	Patient seating and instrument set-up	Chair positioning	1	
2	Cavity preparation	Based on extent of the lesion and selection of material	7	
3	Rubber dam	No voids/leaks	3	
4	Lining/cement	Proper technique	2	
5	Material mixing, matrix, wedge	Proper ratio	3	
6	Restoration	Restore anatomy/contact	3	
7	Carving and polish	Contours restored	2	
8	Table viva	Procedure discussion	2	
	Total		25	

Signature _____

Date _____

Class II Cavity Preparation

No.	Clinical Steps	Criteria	Total Marks	Marks Obtained
1	Patient seating and instrument set-up	Chair positioning	1	
2	Cavity preparation	Based on extent of the lesion and selection of material	7	
3	Rubber dam	No voids/leaks	3	
4	Lining/cement	Proper technique	2	
5	Material mixing, matrix, wedge	Proper ratio	3	
6	Restoration	Restore anatomy/contact	3	
7	Carving and polish	Contours restored	2	
8	Table viva	Procedure discussion	2	
	Total		25	

Signature _____

Date _____

Cavity Preparation for Tooth Colored Restoration (Class III)

No.	Clinical Steps	Criteria	Total Marks	Marks Obtained
1	Patient seating and instrument set-up	Positioning	1	
2	Cavity prep	Margins, walls	7	
3	Rubber dam	Proper placement	3	
4	Matrix & wedge	Proper adaptation	3	
5	Shade selection	Chroma, hue	1	
6	Filling	Restore contact	3	
7	Polishing	Smooth finish	3	
	Total		23	

Signature _____

Date _____

Cavity Preparation for Tooth Colored Restoration (Class IV)

No.	Clinical Steps	Criteria	Total Marks	Marks Obtained
1	Patient seating and instrument set-up	Positioning	1	
2	Cavity prep	Margins, walls	7	
3	Rubber dam	Proper placement	3	
4	Matrix & wedge	Proper adaptation	3	
5	Shade selection	Chroma, hue	1	
6	Filling	Restore contact	3	
7	Polishing	Smooth finish	3	
	Total		23	

Signature _____

Date _____

Cavity Preparation for Tooth Colored Restoration (Class V)

Sr. #	Cavity Preparation	Grades	Remarks
1	Outline Form – Uniform Shape/Continuity		
2	Pulp Axial wall contours relative to original contour of facial tooth surface		
3	Cavo surface Cervical Margin (On Dentine)		
4	Cavo surface Cervical Margin (On Enamel)		
5	External Walls Divergence (Viewed from facial aspect)		
6	Depth of Pulpal-Axial Wall from Gingival Floor Cavity Margin		

Signature _____

Date _____

Tooth Colored Restoration (Class V)

Sr. #	COMPOSITE RESTORATION	Grades	Remarks
1	Restoration Surface Finish		
2	Bonding		
3	Tooth-Restoration Junction		
4	Cervical Overhang		
5	Proximal Contact Tightness (as checked by floss)		
6	Proximal Contact Contours		
7	Occlusal Anatomy		
8	Centric Occlusal Contacts		
9	Marginal Ridge Height Relative to Adjacent Tooth Marginal Ridge Height		

Signature _____

Date _____

Cavity Preparation for Tooth Colored Restoration (Class VI)

Sr. #	Cavity Preparation	Grades	Remarks
1	Outline Form – Uniform Shape/Continuity		
2	Uniform Depth		
3	Cavo surface Margins		

Signature _____

Date _____

Tooth Colored Restoration (Class VI)

Sr. #	COMPOSITE RESTORATION	Grades	Remarks
1	Restoration Surface Finish		
2	Bonding		
3	Tooth-Restoration Junction		
4	Occlusal Anatomy		
5	Centric Occlusal Contacts		

Signature _____

Date

ENDODONTIC PROCEDURE

PATIENT DETAILS

Name _____ OPD No _____ Age _____

Gender _____ Occupation _____ Contact no. _____

Address _____

Chief complaint _____

History of presenting complaint _____

Diagnosis and tooth no _____

Treatment _____

No.	Clinical Steps	Criteria	Total Marks	Marks Obtained
1	Patient seating and tray set-up	Positioning	1	
2	Rubber dam	Seal	3	
3	Access cavity	Tooth anatomy	3	
4	Canal exploration	Locate canals	3	
5	Working length	Radiographs	3	
6	Instrumentation	Cleaning shaping	2	
7	Obturation	Seal	3	
8	Evaluation	No voids	3	
	Total		23	

Remarks _____

Date _____

Signature of
Supervisor _____

CROWN PREPARATION

PATIENT DETAILS

Name _____ OPD No _____ Age _____

Gender _____ Occupation _____ Contact no. _____

Address _____

Chief complaint _____

History of presenting complaint _____

Diagnosis and tooth no _____

Treatment _____

No.	Clinical Steps	Criteria	Total Marks	Marks Obtained
1	Occlusal reduction	Crown type	3	
2	Proximal reduction	Crown type	3	
3	Facial reduction	Crown type	3	
4	Lingual reduction	Crown type	3	
5	Shade selection	Chroma	2	
6	Margin finishing	Taper, margins	3	
7	Occlusal finishing	Smooth	3	
	Total		20	

Remarks _____

Date _____

Signature of
Supervisor _____

RESTORATIVE PROCEDURE FOR PRIMARY TEETH

PATIENT DETAILS

Name _____ OPD No _____ Age _____

Gender _____ Occupation _____ Contact no. _____

Address _____

Presenting complaint _____

Diagnosis and tooth no _____

Steps of restorative procedure.

Remarks

1. Cavity preparation

2. Isolation/Mylar strip/wedge /matrix band

3. Etching

4. Priming/bonding

5. Composite placement

6. Finishing/polishing

Remarks _____

Date _____

Signature of

Supervisor _____

PULPECTOMY/PULPOTOMY

PATIENT DETAILS

Name _____ OPD No _____ Age _____

Gender _____ Occupation _____ Contact no. _____

Address _____

Chief complaint _____

History of presenting complaint _____

Diagnosis and tooth no _____

Treatment _____

Steps of pulpectomy treatment	Remarks
1. Anesthesia	_____
2. Isolation	_____
3. Access cavity preparation	_____
4. Chemomechanical preparation	_____
5. Obturation	_____
6. Permanent Restoration	_____

Remarks _____

Date _____

Signature of Supervisor _____



Skill Lab Internal Assessment

Lab Practices Scored % age	Lab Tests Scored % age	Final %age	Remarks

