Pakistan Medical Commission

National Licensing Examination
for
Dental Graduates

Clinical Skills Examination – Session-2
Assessment Criteria Guide

Overview:

The National Licensing Examination (NLE) for Dentistry comprises of a theory component based on MCQs and a Clinical Skills Examination (CSE) component which has two parts, Session-1 and Session-2.

CSE Session-1 comprises of 15 OSCE stations, while CSE Session-2 comprises of 3 OSCE stations.

This document serves as candidates' guide for the assessment criteria used for CSE Session-2.

Aim and Rationale of CSE Session-2:

The CSE Session-2 examination is designed to test a candidate's psychomotor skills in the context of procedures that a new dentist will be required to perform, keeping in mind patient wellbeing and safety.

While clinical situations vary greatly, requiring unique treatment plans and tooth preparations, in the examination however, the focus will be on assessing a candidate's ability to use a handpiece, other instruments and materials for delivering treatment with minimal tissue removal and damage to teeth.

Assessment:

Grading of the procedures will be undertaken by the examiners based on an assessment rubric with defined criteria.

During assessment one of four grades will be assigned to each criterion as follows:

A = Exceeds minimal standard
B = Meets minimal standard
C = Below minimal standard
D = Critically below minimal standard / Not done

Higher weightage will be assigned to assessment criteria related to patient safety and tissue damage.

Procedures to be Performed:

Any combination of objectives from the CSE syllabus may be assessed in the examination. Some sample procedures along with their assessment criteria follow to help prepare for the examination.

The procedures that follow are only a subset of the procedures that may be examined, and should not be taken as a comprehensive or definitive procedure list for the CSE Session-2.

(Please note: The photographs accompanying the assessment criteria that follow are included only to illustrate assessment concepts and are not intended to be used as a reference or guide for performing the procedures.)

Class 1 Amalgam – Molar – Cavity Preparation

Preparation Design:

Minimally invasive preparation following the occlusal fissure pattern

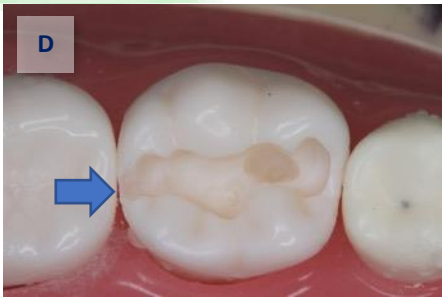
Reference:
Sturdevant's Art and Science of Operative Dentistry, Ritter-Boushell-Walter, Second South Asia Edition

Grading Key:

A = Exceeds minimal standard
B = Meets minimal standard
C = Below minimal standard
D = Critically below minimal standard / Not done

Outline Form - Marginal Ridges - Mesiodistal Width (both ridges will be assessed separately)	
A	> 2.0 mm
B	≥ 1.5 mm to ≤ 2.0 mm
C	< 1.5 mm but ridge intact
D	Marginal ridge broken or damaged

Reference: Page 321, figure 13.29, figure 13.30



Outline Form - Faciolingual Width of Preparation	
A	≥ 1 mm to ≤ 1.5 mm
B	>1.5 mm to ≤ 2.0 mm
C	≥ 0.5 mm to <1.0 mm OR > 2.0 mm to ≤ 2.5 mm
D	< 0.5mm OR > 2.5mm

Reference: Page 319

Outline Form - Irregularity and/or Sharp Angles	
A	None
B	On one wall only
C	On two walls only
D	On more than two walls

Reference: Page 319

Outline Form - Correspondence to Occlusal Fissure Pattern - Extension	
A	Follows closely
B	Follows with some under extensions
C	Some over extensions
D	Grossly over extended / Grossly under extended

Reference: Page 307, 320

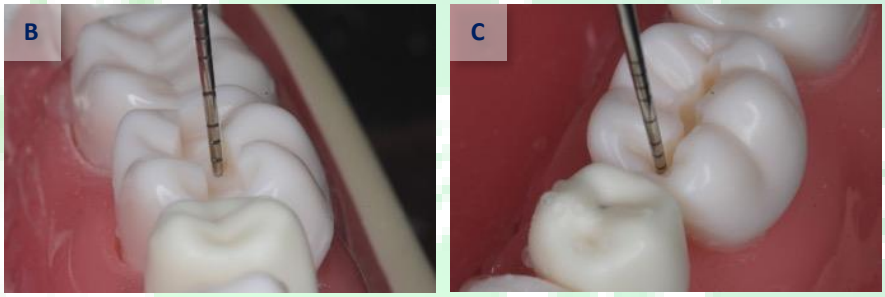
Outline Form - Correspondence to Occlusal Fissure Pattern - Faciolingual Placement	
A	Corresponds

B	-
C	Does not correspond but cusps not damaged
D	Does not correspond but one or more cusps damaged

Reference: Page 307, 320

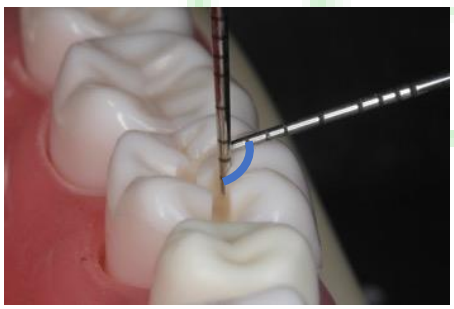
Pulpal Floor Depth From Cavity Margin	
A	Uniformly ≥ 1.5 mm to ≤ 2.0 mm
B	Some portion or all of the floor is ≥ 1.0 mm to < 1.5 mm OR > 2.0 mm to ≤ 3.0 mm
C	Some portion or all of the floor is ≥ 0.5 mm to < 1.0 mm
D	Some portion or all of the floor is < 0.5 mm OR Some portion or all of the floor is > 3.0 mm

Reference: Page 309, 319



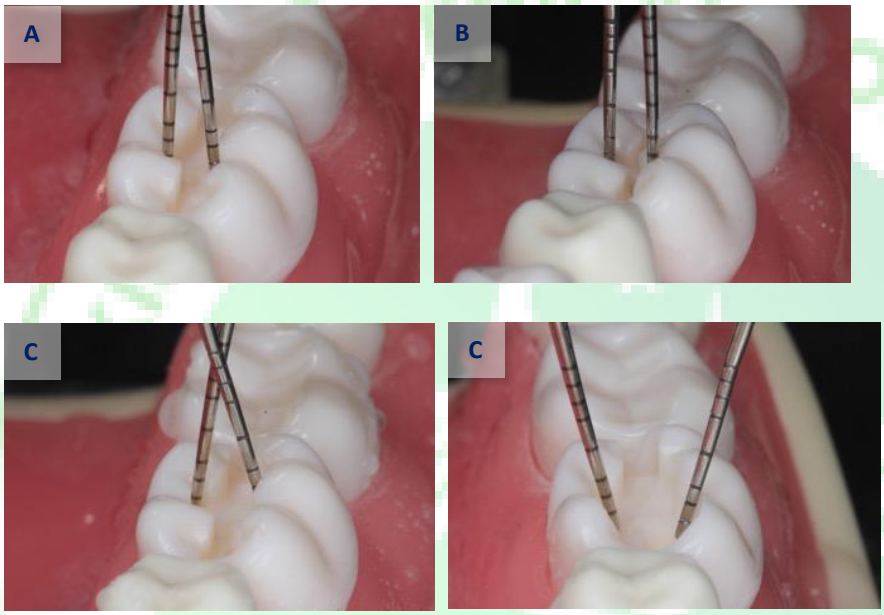
Cavosurface Margin Angle of 90°- 110°	
A	On all margins
B	On 2 or 3 margins only
C	On 1 margin only
D	Any margin damaged

Reference: Page 307, 320, figure 13.12, 13.51



External Walls - Facial & Lingual Wall Convergence	
A	Slight occlusal convergence in all sections
B	Nearly parallel in all sections
C	Occlusal divergence OR excessive convergence in any section
D	Either wall damaged

Reference: Page 320



External Walls - Mesial & Distal Wall Convergence	
A	Slight occlusal convergence
B	Nearly parallel
C	Occlusal divergence OR excess convergence
D	Either wall damaged

Reference: Page 323, figure 13.30

Class 1 Amalgam – Premolar - Preparation

Preparation Design:

Minimally invasive preparation following the occlusal fissure pattern

Reference:
Sturdevant's Art and Science of Operative Dentistry, Ritter-Boushell-Walter, Second South Asia Edition

Grading Key:

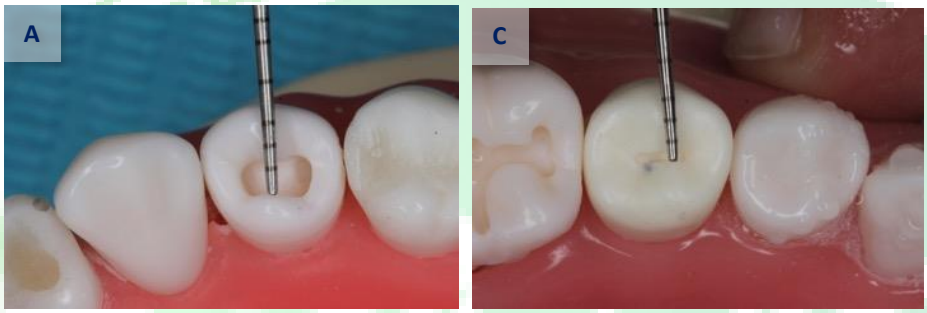
A = Exceeds minimal standard
B = Meets minimal standard
C = Below minimal standard
D = Critically below minimal standard / Not done

Outline Form - Marginal Ridges - Mesiodistal Width (both ridges will be assessed separately)	
A	> 1.6 mm
B	≥ 1.0 mm to ≤ 1.6mm
C	< 1.0 mm but ridge intact
D	Marginal ridge broken or damaged

Reference: Page 321, figure 13.29, figure 13.30

Outline Form - Faciolingual Width of Preparation	
A	≥ 1 mm to ≤ 1.5 mm
B	>1.5 mm to ≤ 2.0 mm
C	≥ 0.5 mm to <1.0 mm OR > 2.0 mm to ≤ 2.5 mm
D	< 0.5mm OR > 2.5mm

Reference: Page 319



Outline Form - Irregularity and/or Sharp Angles	
A	None
B	On one wall only
C	On two walls only
D	On more than two walls

Reference: Page 319

Outline Form - Correspondence to Occlusal Fissure Pattern - Extension	
A	Follows closely
B	Follows with some under extensions
C	Some over extensions
D	Grossly over extended / Grossly under extended

Reference: Page 307, 320

Outline Form - Correspondence to Occlusal Fissure Pattern - Faciolingual Placement	
A	Corresponds
B	-
C	Does not correspond but cusps not damaged
D	Does not correspond but one or more cusps damaged

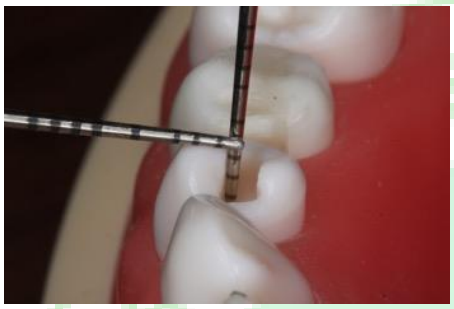
Reference: Page 307, 320

Pulpal Floor Depth From Cavity Margin	
A	Uniformly ≥ 1.5 mm to ≤ 2.0 mm
B	Some portion or all of the floor is ≥ 1.0 mm to < 1.5 mm OR > 2.0 mm to ≤ 3.0 mm
C	Some portion or all of the floor is ≥ 0.5 mm to < 1.0 mm
D	Some portion or all of the floor is < 0.5 mm OR Some portion or all of the floor is > 3.0 mm

Reference: Page 309, 319

Cavosurface Margin Angle of 90°- 110°	
A	On all margins
B	On 2 or 3 margins only
C	On 1 margin only
D	Any margin damaged

Reference: Page 307, 320, figure 13.12, 13.51

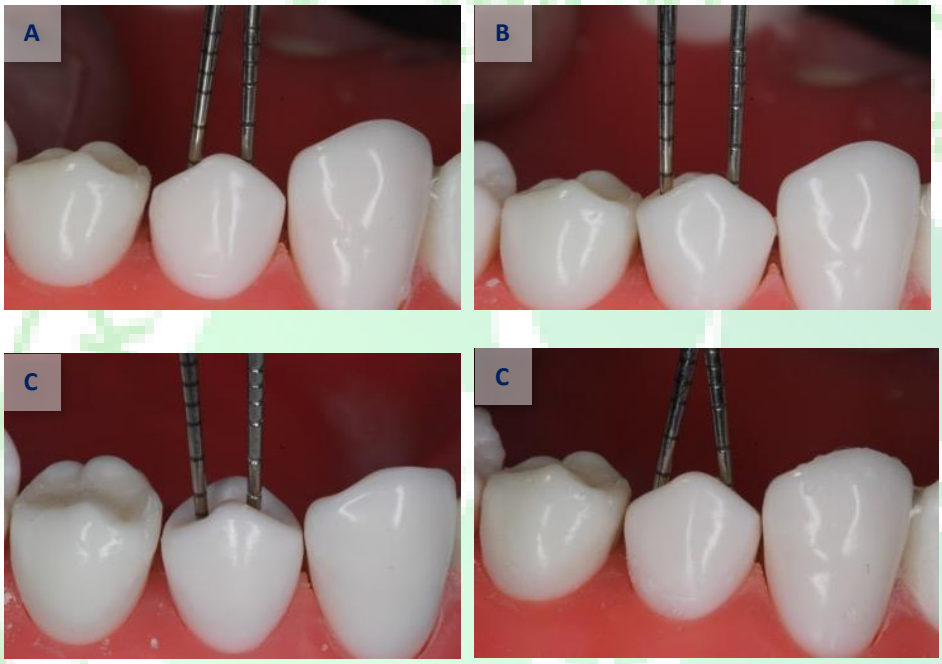


External Walls - Facial & Lingual Wall Convergence	
A	Slight occlusal convergence in all sections
B	Nearly parallel in all sections
C	Occlusal divergence OR excessive convergence in any section
D	Either wall damaged

Reference: Page 320

External Walls - Mesial & Distal Wall Convergence	
A	Slight occlusal convergence
B	Nearly parallel
C	Occlusal divergence OR excess convergence
D	Either wall damaged

Reference: Page 323, figure 13.30



Class 1 Amalgam – Restoration

Reference:
Sturdevant's Art and Science of Operative Dentistry, Ritter-Boushell-Walter, Second South Asia Edition - Page 312-318

Grading Key:

A = Exceeds minimal standard
B = Meets minimal standard
C = Below minimal standard
D = Critically below minimal standard / Not done

Restoration Surface Finish	
A	Smooth
B	Some areas of roughness - correctable by polishing
C	Excessive roughness - not correctable by polishing
D	Gross defects

Defects or Voids in Amalgam	
A	None
B	Up to 0.5 mm - restoration integrity not affected
C	> 0.5mm to ≤ 1 mm - restoration integrity affected
D	> 1 mm - restoration replacement required

Tooth-Restoration Junction	
A	Not detectable by a probe in its entirety
B	Detectable by a probe in some areas - not detectable visually
C	Visually detectable discrepancy - restoration replacement not necessary
D	Gross discrepancy - restoration replacement necessary

Occlusal Anatomy	
A	Optimally carved
B	Not optimal but acceptable
C	Poorly defined
D	No tooth morphology evident - requires restoration replacement

Centric Occlusal Contacts	
A	Are consistent with such contacts on other teeth in that quadrant.
B	Are in slight hyper or infra occlusion - restoration is adjustable and replacement is not required
C	Are in hyperocclusion so that the restoration is the only point of occlusion in that quadrant - restoration can be adjusted
D	Are in gross infraocclusion - the restoration requires to be redone

Mercury Safety	
A	Appropriate precautions were taken when handling dental amalgam and waste was disposed off safely
B	-
C	-
D	Dental amalgam was handled in an unsafe manner or waste was not disposed off safely

Class 2 Amalgam – Molar – Cavity Preparation

Preparation Design:

Minimally invasive occlusal extension following the occlusal fissure pattern.
Minimally invasive proximal box preparation observing mechanical and biological requirements.

Reference:
Sturdevant's Art and Science of Operative Dentistry, Ritter-Boushell-Walter, Second South Asia Edition

Grading Key:

A = Exceeds minimal standard
B = Meets minimal standard
C = Below minimal standard
D = Critically below minimal standard / Not done

Outline Form - Marginal Ridge - Mesiodistal Width (For remaining ridge)	
A	> 2.0 mm
B	≥ 1.5 mm to ≤ 2.0 mm
C	< 1.5 mm but ridge intact
D	Marginal ridge broken or damaged

Reference: Page 321, figure 13.29, figure 13.30

Outline Form - Correspondence to Occlusal Fissure Pattern - Faciolingual Placement	
A	Corresponds
B	-
C	Does not correspond but cusps not damaged
D	Does not correspond but one or more cusps damaged

Reference: Page 307, 320

Pulpal Floor Depth From Occlusal Cavity Margin	
A	Uniformly ≥ 1.5 mm to ≤ 2.0 mm
B	Some portion or all of the floor is ≥ 1.0 mm to < 1.5 mm OR > 2.0 mm to ≤ 3.0 mm
C	Some portion or all of the floor is ≥ 0.5 mm to < 1.0 mm
D	Some portion or all of the floor is < 0.5 mm OR Some portion or all of the floor is > 3.0 mm

Reference: Page 309, 319

Cavosurface Margin Angle of 90°- 110° - Occlusal Extension	
A	On all margins
B	On 2 margins only
C	On 1 margin only
D	On none of the margins OR any margin damaged

Reference: Page 307, 320, figure 13.12, 13.51

Cavosurface Margin Angle of 90°- 110° - Proximal Box Facial and Lingual External Walls	
A	On both margins
B	-
C	On 1 margin only
D	On none of the margins OR any margin damaged

Reference: Page 307, 320, figure 13.12, 13.51

External Walls - Facial & Lingual Wall Convergence (Occlusal Extension)	
A	Slight occlusal convergence in all sections
B	Nearly parallel in all sections
C	Occlusal divergence OR excessive convergence in any section
D	Either wall damaged

Reference: Page 320

External Wall - Remaining Mesial or Distal Wall Convergence Relative to Long Axis of Tooth (Occlusal Extension)	
A	Slight occlusal convergence
B	Nearly parallel
C	Occlusal divergence OR excess convergence
D	Wall damaged

Reference: Page 323, figure 13.30

Proximal Box External Walls Convergence (Facial & Lingual)	
A	Slight occlusal convergence
B	Nearly parallel
C	Occlusal divergence OR excess convergence
D	Any wall damaged

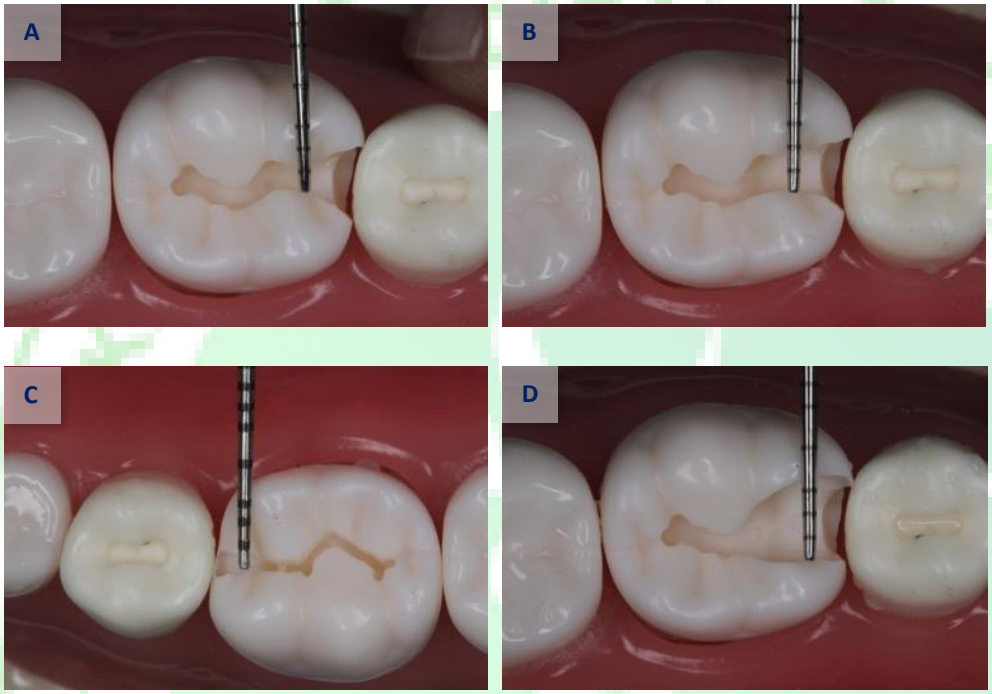
Reference: Page 344

Axio-Pulpal Line Angle Bevel	
A	Present
B	-
C	Absent
D	Over prepared or line angle damaged

Reference: Page 344, 346, figure 13.71

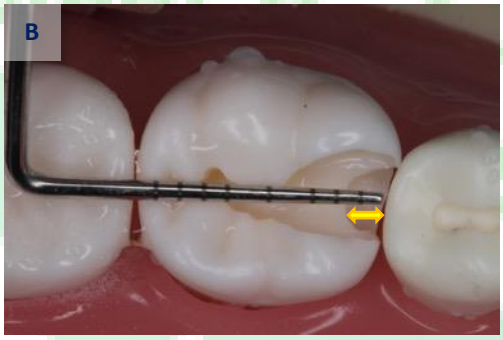
Isthmus - Faciolingual Width	
A	≥ 0.8 mm to ≤ 1.5 mm
B	> 1.5 mm to ≤ 2 mm
C	< 0.8 mm.
D	> 2 mm

Reference: Page 338



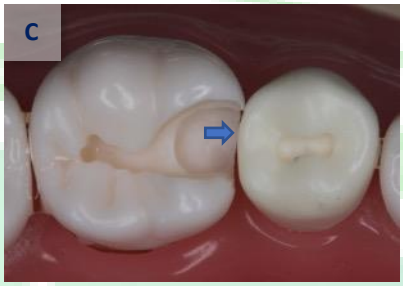
Depth of Pulpal-Axial Wall From Gingival Floor Cavity Margin	
A	≥ 0.75mm to ≤ 1.0 mm.
B	≥ 0.5 mm to < 0.75 mm OR > 1.0 mm to ≤ 2.0 mm
C	< 0.5 mm.
D	> 2.0 mm

Reference: Page 340



Clearance of Gingival Floor Cavity Margin from Adjacent Tooth Surface	
A	≤ 0.5 mm but visibly open along the entire margin
B	> 0.5 mm to ≤1.5 mm
C	Visibly closed at any point
D	> 1.5 mm at any point

Reference: Page 340, figure 13.62(F)



Clearance of Axial Cavity Margins at Height of Contour From Adjacent Tooth Surface	
A	≤ 0.5 mm but visibly open for both margins
B	> 0.5 mm to ≤ 1.5 mm for one or both margins
C	Visibly closed for one or both margins
D	> 1.5 mm for one or both margins

Reference: Page 340

Damage to Adjacent Tooth Surface	
A	No damage
B	Damaged and requires smoothening only
C	Damaged and requires re-contouring and smoothening
D	Grossly damaged requiring a restoration in the adjacent tooth

Reference: Page 311, 342, 344

Class 2 Amalgam – Premolar – Cavity Preparation

Preparation Design:

Minimally invasive occlusal extension following the occlusal fissure pattern.
Minimally invasive proximal box preparation observing mechanical and biological requirements.

Reference:
Sturdevant's Art and Science of Operative Dentistry, Ritter-Boushell-Walter, Second South Asia Edition

Grading Key:

A = Exceeds minimal standard
B = Meets minimal standard
C = Below minimal standard
D = Critically below minimal standard / Not done

Outline Form - Marginal Ridge (Remaining) - Mesiodistal Width	
A	> 1.6 mm
B	≥ 1.0 mm to ≤ 1.6mm
C	< 1.0 mm but ridge intact
D	Marginal ridge broken or damaged

Reference: Page 321, figure 13.29, figure 13.30

Outline Form - Correspondence to Occlusal Fissure Pattern - Faciolingual Placement	
A	Corresponds
B	-
C	Does not correspond but cusps not damaged
D	Does not correspond but one or more cusps damaged

Reference: Page 307, 320

Pulpal Floor Depth From Occlusal Cavity Margin	
A	Uniformly ≥ 1.5 mm to ≤ 2.0 mm
B	Some portion or all of the floor is ≥ 1.0 mm to < 1.5 mm OR > 2.0 mm to ≤ 3.0 mm
C	Some portion or all of the floor is ≥ 0.5 mm to < 1.0 mm
D	Some portion or all of the floor is < 0.5 mm OR Some portion or all of the floor is > 3.0 mm

Reference: Page 309, 319

Occlusal Cavosurface Margin Angle of 90°- 110°	
A	On all margins
B	On 2 margins only
C	On 1 margin only
D	Any margin damaged

Reference: Page 307, 320, figure 13.12, 13.51

Cavosurface Margin Angle of 90°- 110° - Proximal Box Facial and Lingual External Walls	
A	On both margins
B	-
C	On 1 margin only
D	On none of the margins OR any margin damaged

Reference: Page 307, 320, figure 13.12, 13.51

External Walls - Facial & Lingual Wall Convergence (Occlusal Extension)	
A	Slightly occlusal convergence in all sections
B	Nearly parallel in all sections
C	Occlusal divergence OR excessive convergence in any section
D	Either wall damaged

Reference: Page 320

External Wall - Remaining Mesial or Distal Wall Convergence Relative to Long Axis of Tooth (Occlusal Extension)	
A	Slight occlusal convergence
B	Nearly parallel
C	Occlusal divergence OR excess convergence
D	Wall damaged

Reference: Page 323, figure 13.30

Proximal Box External Walls Convergence (Facial & Lingual)	
A	Slight occlusal convergence
B	Nearly parallel
C	Occlusal divergence OR excess convergence
D	Any wall damaged

Reference: Page 344

Axio-Pulpal Line Angle Bevel	
A	Present
B	-
C	Absent
D	Over prepared or line angle damaged

Reference: Page 344, 346, figure 13.71

Isthmus - Faciolingual Width	
A	≥ 0.8 mm to ≤ 1.5 mm
B	> 1.5 mm to ≤ 2 mm
C	< 0.8 mm.
D	> 2 mm

Reference: Page 338

Depth of Pulpal-Axial Wall From Gingival Floor Cavity Margin	
A	≥ 0.75mm to ≤ 1.0 mm.
B	≥ 0.5 mm to < 0.75 mm OR > 1.0 mm to ≤ 2.0 mm
C	< 0.5 mm.
D	> 2.0 mm

Reference: Page 340

Clearance of Gingival Floor Cavity Margin from Adjacent Tooth Surface	
A	≤ 0.5 mm but visibly open along the entire margin
B	> 0.5 mm to ≤1.5 mm
C	Visibly closed at any point
D	> 1.5 mm at any point

Reference: Page 340, figure 13.62(F)

Clearance of Axial Cavity Margins at Height of Contour From Adjacent Tooth Surface	
A	≤ 0.5 mm but visibly open for both margins
B	> 0.5 mm to ≤ 1.5 mm for one or both margins
C	Visibly closed for one or both margins
D	> 1.5 mm for one or both margins

Reference: Page 340

Damage to Adjacent Tooth Surface	
A	No damage
B	Damaged and requires smoothening only
C	Damaged and requires re-contouring and smoothening
D	Grossly damaged requiring a restoration in the adjacent tooth

Reference: Page 311, 342, 344

Class 2 Amalgam – Restoration

Reference:
Sturdevant's Art and Science of Operative Dentistry, Ritter-Boushell-Walter, Second South Asia Edition - Page 312-318

Grading Key:

A = Exceeds minimal standard
B = Meets minimal standard
C = Below minimal standard
D = Critically below minimal standard / Not done

Restoration Surface Finish	
A	Smooth
B	Some areas of roughness - correctable by polishing
C	Excessive roughness - not correctable by polishing
D	Gross defects

Defects or Voids in Amalgam	
A	None
B	Up to 0.5 mm - restoration integrity not afffected
C	> 0.5mm to ≤ 1 mm - restoration integrity affected
D	> 1 mm - restoration replacement required

Tooth-Restoration Junction	
A	Not detectable by a probe in its entirety
B	Detectable by a probe in some areas - not detectable visually
C	Visually detectable discrepancy - restoration replacement not necessary
D	Gross discrepancy - restoration replacment necessary

Cervical Amalgam Overhang	
A	None detectable
B	≤1.0 mm - correctable by adjusting and polishing
C	>1.0 mm - correctable by adjusting and polishing
D	Excessive requiring restoration replacement

Proximal Contact Tightness (as checked by floss)	
A	Optimal proximal contact tightness
B	Slightly Light proximal contact
C	Proximal contact loose
D	Proximal contact absent

Proximal Contact Contours	
A	Resemble anatomical form
B	Deviate slightly from anatomical form - functionally acceptable
C	Deviate significantly from anatomical form - functionally acceptable
D	Proximal contact does not resemble anatomical form - functionally not acceptable

Occlusal Anatomy	
A	Optimally carved
B	Not optimal but acceptable
C	Poorly defined
D	Tooth morphology not exhibited - requires restoration replacement

Centric Occlusal Contacts	
A	Are consistent with such contacts on other teeth in that quadrant.
B	Are in slight hyper or infra occlusion - restoration is adjustable and replacement is not required
C	Are in hyperocclusion so that the restoration is the only point of occlusion in that quadrant - restoration can be adjusted
D	Are in gross infraocclusion - the restoration requires to be redone

Marginal Ridge Height Relative to Adjacent Tooth Marginal Ridge Height	
A	Matches
B	<0.5mm discrepancy
C	0.5mm to ≤ 1.0mm discrepancy
D	>1.0mm discrepancy

Mercury Safety	
A	Appropriate precautions were taken when handling dental amalgam and waste was disposed off safely
B	-
C	-
D	Dental amalgam was handled in an unsafe manner or waste was not disposed off safely

Class 2 Composite - "Box-Only" Cavity Preparation

Preparation Design:

Minimally invasive Class 2 "Box Only" design

Reference:
Sturdevant's Art and Science of Operative Dentistry, Ritter-Boushell-Walter, Second South Asia Edition - Page 507, figure 9.13

Grading Key:

A = Exceeds minimal standard
B = Meets minimal standard
C = Below minimal standard
D = Critically below minimal standard / Not done

Outline Form - Shape/Continuity	
A	Smooth
B	-
C	Jagged
D	-

Reference: Page 507

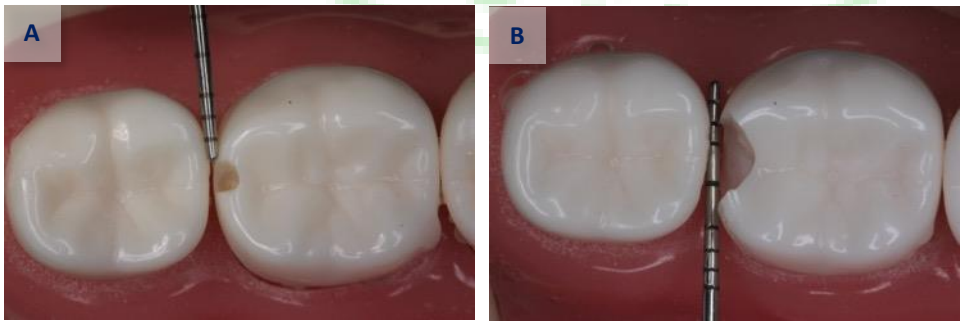
Proximal Box External Walls Convergence (Facial & Lingual)	
A	Close to parallel
B	-
C	Excessive occlusal divergence OR excess convergence
D	-

Clearance of Axial Cavity Margins at Height of Contour From Adjacent Tooth Surface	
A	≤ 0.5 mm OR visibly closed for both margins
B	> 0.5 mm to ≤ 1.0 mm for one or both margins
C	> 1.0 mm to ≤ 2.0 mm for one or both margins
D	> 2.0 mm for one or both margins

Reference: Page 507, figure 19.12, 19.13

Clearance of Gingival Floor Cavity Margin from Adjacent Tooth Surface	
A	≤ 0.5 mm OR visibly closed
B	> 0.5 mm to ≤ 1.0 mm
C	> 1.0 mm to ≤ 2.0 mm
D	> 2.0 mm

Reference: Page 507, figure 19.12, 19.13



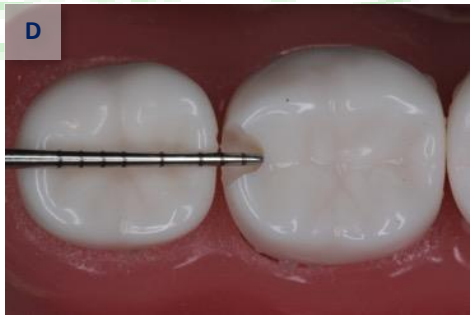
Cavosurface Angle - Facial and Lingual External Walls	
A	≅ 90° for both walls
B	Deviates from 90° for one or both walls but cavosurface margins not damaged
C	-
D	One or both cavosurface margins are damaged

Reference: Page 506, 507, figure 19.12

Gingival Floor	
A	The gingival floor is well defined
B	-
C	The gingival floor is poorly defined
D	-

Depth of Pulpal-Axial Wall From Gingival Floor Cavity Margin	
A	≥ 0.75mm to ≤ 1.0 mm.
B	≥ 0.5 mm to < 0.75 mm OR > 1.0 mm to ≤ 1.5 mm
C	< 0.5 mm
D	> 1.5 mm

Reference: Page 272



Damage to Adjacent Tooth Surface	
A	No damage
B	Minimal damage correctable by polishing only
C	Damaged requiring re-contouring and polishing
D	Gross damage requiring a restoration in the adjacent tooth

Reference: Page 311, 342, 344

Class 2 Composite - "Box-Only" Restoration

Preparation Design:

Minimally invasive Class 2 "Box Only" design

Reference:
Sturdevant's Art and Science of Operative Dentistry, Ritter-Boushell-Walter, Second South Asia Edition – Page 510-514

Grading Key:

A = Exceeds minimal standard
B = Meets minimal standard
C = Below minimal standard
D = Critically below minimal standard / Not done

Restoration Surface Finish	
A	Smooth with Gloss
B	Smooth but with no Gloss - correctable by polishing
C	Some roughness - correctable by finishing and polishing
C	Excessive roughness - restoration repair or replacement required

Tooth-Restoration Junction	
A	Not detectable by a probe in its entirety
B	Detectable by a probe in some areas - not detectable visually
C	Visually detectable discrepancy - restoration replacement not necessary
D	Gross discrepancy - restoration replacement necessary

Cervical Composite Overhang	
A	None detectable
B	≤ 0.5 mm - correctable by adjusting and polishing
C	> 0.5 to 1.0 mm - correctable by adjusting and polishing
D	Excessive requiring restoration replacement

Proximal Contact Tightness (as checked by floss)	
A	Optimal
B	Slightly light or extremely tight but floss passable
C	Extremely light or floss not passable
D	Proximal contact absent / Open Contact

Proximal Contact Contour	
A	Resemble anatomical form
B	Deviate slightly from anatomical form - functionally acceptable
C	Deviate significantly from anatomical form - functionally acceptable
D	Does not resemble anatomical form - functionally not acceptable

Occlusal Anatomy	
A	Optimal
B	Not optimal but acceptable
C	Poorly defined
D	Tooth morphology not exhibited - requires restoration replacement

Centric Occlusal Contacts	
A	Are consistent with such contacts on other teeth in that quadrant.
B	Are in slight hyper or infra occlusion - restoration is adjustable and replacement is not required
C	Are in hyperocclusion so that the restoration is the only point of occlusion in that quadrant - restoration can be adjusted
D	Are in gross infraocclusion - the restoration requires to be redone or repaired

Marginal Ridge Height Relative to Adjacent Tooth Marginal Ridge Height	
A	Similar in height
B	< 0.5mm discrepancy
C	0.5mm to ≤ 1.0mm discrepancy
D	> 1.0mm discrepancy

Bonding	
A	The composite material is adapted and bonded to the preparation surfaces
B	-
C	-
D	The composite material is not adapted and bonded to the preparation surfaces

Class 3 Composite – Cavity Preparation

Preparation Design:

- Small sized conservative preparation
- Cavity is to be prepared from the lingual aspect of the tooth

Reference:
Sturdevant's Art and Science of Operative Dentistry, Ritter-Boushell-Walter, Second South Asia Edition - Page 516, 518, 519

Grading Key:

A = Exceeds minimal standard
B = Meets minimal standard
C = Below minimal standard
D = Critically below minimal standard / Not done

Clearance of Facial Wall Cavity Margin from Adjacent Tooth Surface at Height of Contour	
A	≤ 0.5 mm OR visibly closed
B	> 0.5 mm to ≤ 1.0 mm
C	> 1.0 mm to ≤ 2.0 mm
D	> 2.0 mm

Reference: Page 519

Greatest Incisogingival Dimension of Preparation	
A	≥ 1 mm to ≤ 2.0 mm
B	< 1 mm but not zero OR > 2.0 mm to ≤ 2.5 mm
C	> 2.5 mm OR Integrity of incisal angle is compromised
D	The incisal angle is removed or fractured.

Reference: Page 519

Clearance of Gingival Floor Cavity Margin From Adjacent Tooth Surface	
A	≤ 0.5 mm OR visibly closed
B	> 0.5 mm to ≤ 1.0 mm
C	> 1.0 mm to ≤ 2.0 mm
D	> 2.0 mm

Reference: Page 519

Cavosurface Margin Bevels (Lingual)	
A	≅ 1.0 mm in width uniformly
B	-
C	No bevel
D	Cavosurface margin is damaged

Reference: Page 520

Depth of Pulpal-Axial Wall From Gingival Floor Cavity Margin	
A	≥ 0.5 mm to ≤ 1.0 mm
B	> 1.0 mm to ≤ 2.0 mm OR < 0.5 mm but with a distinct cavity margin evident
C	Excessively shallow with no cavity margin evident
D	> 2.0 mm

Reference: Page 519

Damage to Adjacent Tooth Surface	
A	No damage
B	Damaged and requires smoothening only
C	Damaged and requires re-contouring and smoothening
D	Grossly damaged requiring a restoration in the adjacent tooth

Reference: Page 311, 342, 344

Class 3 Composite - Restoration

Preparation Design:

Minimally invasive Class 2 "Box Only" design

Reference:
Sturdevant's Art and Science of Operative Dentistry, Ritter-Boushell-Walter, Second South Asia Edition - Page 522-527

Grading Key:

A = Exceeds minimal standard
B = Meets minimal standard
C = Below minimal standard
D = Critically below minimal standard / Not done

Restoration Surface Finish	
A	Smooth with Gloss
B	Smooth but with no Gloss - correctable by polishing
C	Some roughness - correctable by finishing and polishing
D	Excessive roughness - restoration repair or replacement required

Tooth-Restoration Junction	
A	Not detectable by a probe in its entirety
B	Detectable by a probe in some areas - not detectable visually
C	Visually detectable discrepancy - restoration replacement not necessary
D	Gross discrepancy - restoration replacement necessary

Proximal Contact Tightness (as checked by floss)	
A	Optimal
B	Slightly light or extremely tight but floss passable
C	Extremely light or floss not passable
D	Proximal contact absent / Open Contact

Facial & Lingual Surface Contours	
A	Resemble anatomical form
B	Deviate slightly from anatomical form - functionally acceptable
C	Deviate significantly from anatomical form - functionally acceptable
D	Does not resemble anatomical form - functionally not acceptable

Centric Occlusal Contacts	
A	Are consistent with such contacts on other teeth in that quadrant.
B	Are in slight hyper or infra occlusion - restoration is adjustable and replacement is not required
C	Are in hyperocclusion so that the restoration is the only point of occlusion in that quadrant - restoration can be adjusted
D	Are in gross infraocclusion - the restoration requires to be redone or repaired

Bonding	
A	The composite material is adapted and bonded to the preparation surfaces
B	-
C	-
D	The composite material is not adapted and bonded to the preparation surfaces

Class 5 Large Defect - GIC/RMGIC – Cavity Preparation

Preparation Design:

- Large facial preparation extending onto the root surface
- Occlusal margin on enamel
- Cervical margin on dentine
- Mesial and distal margins not extending onto proximal surfaces

Reference:
Sturdevant's Art and Science of Operative Dentistry, Ritter-Boushell-Walter, Second South Asia Edition - Page 540

Grading Key:

A = Exceeds minimal standard
B = Meets minimal standard
C = Below minimal standard
D = Critically below minimal standard / Not done

Cavosurface Cervical Margin (On Dentine)	
A	Well defined margins at 90° to root surface
B	Defined margin but not at 90° to root surface
C	Poorly defined margin
D	No margin is detectable on probing

Reference: Page 536, 537, Figure 19.51

Cavosurface Margin on Enamel Areas	
A	Well defined margins at 90° to external tooth surface. 45° degree bevelled margins also acceptable
B	Poorly defined margins
C	Margins not defined
D	-

Reference: Page 536, 537, Figure 19.51

Pulpo-Axial Wall Contours Relative to Original Contours of Facial Tooth Surface	
A	Follows original contour
B	Follows original contour in some areas
C	Does not follow contour
D	-

Reference: Page 536, 537, Figure 19.51

Pulpo-Axial Wall Depth from Cavosurface Margin	
A	1 mm to 1.5 mm
B	> 0.5 mm to < 1.0 mm
C	> 1.5 mm to 2.0 mm
D	> 2mm

Reference: Page 272

External Walls Divergence (as viewed from facial aspect)	
A	Outwards divergence for all walls
B	Outwards divergence for some walls only
C	Nearly parallel walls
D	Walls exhibit pronounced undercuts

Reference: Page 537

Class 5 Large Defect - GIC/RMGIC - Restoration

Preparation Design:

- Large facial preparation extending onto the root surface
- Occlusal margin on enamel
- Cervical margin on dentine
- Mesial and distal margins not extending onto proximal surfaces

Reference:
Sturdevant's Art and Science of Operative Dentistry, Ritter-Boushell-Walter, Second South Asia Edition - Page 540

Grading Key:

A = Exceeds minimal standard
B = Meets minimal standard
C = Below minimal standard
D = Critically below minimal standard / Not done

Tooth-Restoration Junction	
A	Not detectable by a probe in its entirety
B	Detectable by a probe in some areas - not detectable visually
C	Visually detectable discrepancy - restoration replacement not necessary
D	Gross discrepancy - restoration replacement necessary

Restoration Surface Finish	
A	Smooth
B	Some areas of roughness - correctable by finishing
C	Excessive roughness that - not correctable by finishing
D	Gross defects - restoration replacement necessary

Surface Contours	
A	Resemble anatomical form
B	Deviate slightly from anatomical form - functionally acceptable
C	Deviate significantly from anatomical form - functionally acceptable
D	Do not resemble anatomical form - functionally not acceptable

Porcelain Fused to Metal Crown - Posterior Tooth - Preparation

Preparation Design:

- All margins in metal with lingual and proximal cervical metal collar. All other surfaces in porcelain fused to metal including contact areas

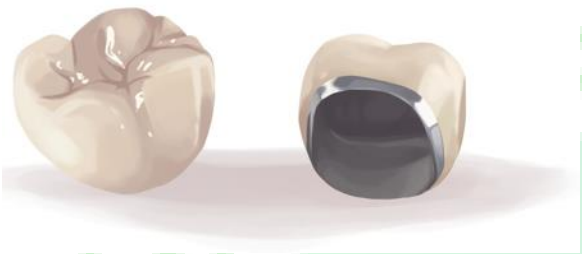


Image credit: https://www.authoritydental.org/

- Any facial marginal design (90° shoulder, 120° shoulder, bevelled shoulder (*Contemporary Fixed Prosthodontics, Rosenstiel-Land-Fujimoto, First South Asia Edition* Page 231, Figure 9-16, 9-17)) fulfilling the assessment criteria is acceptable

- Chamfer margins are required for lingual and proximal

Primary Reference:
Contemporary Fixed Prosthodontics, Rosenstiel-Land-Fujimoto, First South Asia Edition

Grading Key:

A = Exceeds minimal standard
B = Meets minimal standard
C = Below minimal standard
D = Critically below minimal standard / Not done

Facial Margin - Extension Relative to (Simulated) Free Gingival Margin	
A	At gingival margin OR up to 0.5 mm below gingival margin
B	Up to 1 mm above gingival margin
C	> 0.5 mm to ≤ 1.0 below gingival margin OR > 1.0 mm above gingival margin
D	> 1.0 mm below gingival margin

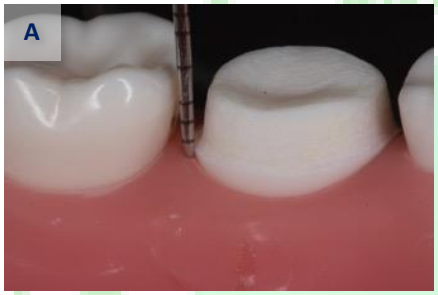
Reference: page 125-126

Lingual Margin - Extension Relative to (Simulated) Free Gingival Margin	
A	Up to 1 mm Above gingival margin
B	At gingival margin or up to 0.5 mm below gingival margin OR > 1 mm and ≤ 2 mm above the gingival margin
C	> 0.5 mm to ≤ 1.0 below gingival margin OR > 2 mm above the gingival margin
D	> 1.0 mm below gingival margin

Reference: page 126

Mesial Margin - Extension Relative to (Simulated) Free Gingival Margin	
A	Up to 1 mm Above gingival margin
B	At gingival margin or up to 0.5 mm below gingival margin OR > 1 mm and ≤ 2 mm above the gingival margin
C	> 0.5 mm to ≤ 1.0 below gingival margin OR > 2 mm above the gingival margin
D	> 1.0 mm below gingival margin

Reference: page 126



Distal Margin - Extension Relative to (Simulated) Free Gingival Margin	
A	Up to 1 mm Above gingival margin
B	At gingival margin or up to 0.5 mm below gingival margin OR > 1 mm and ≤ 2 mm above the gingival margin
C	> 0.5 mm to ≤ 1.0 below gingival margin OR > 2 mm above the gingival margin
D	> 1.0 mm below gingival margin

Reference: page 126

Cervical Margin - Continuity	
A	Continuous around preparation
B	Continuous around preparation but lacks definition in areas
C	Continuous around preparation but "cupped" or "j-shaped" margins in areas
D	Not continuous around preparation

Reference: page 177

Cervical Margin - Smoothness	
A	Smooth all round the preparation
B	Smooth in the majority of areas
C	Smooth only in a minority of areas
D	Rough margin overall

Reference: page 177

Cervical Margin Width - Facial	
A	1.0 mm to 1.2 mm
B	0.5 mm to < 1.0 mm OR > 1.2 mm to 1.5 mm
C	< 0.5 mm OR > 1.5 mm to 2 mm
D	> 2 mm

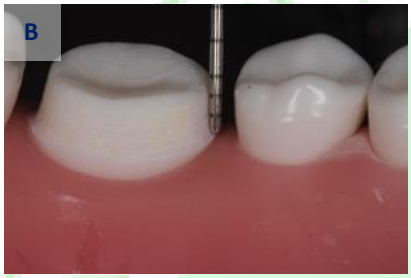
Reference: Page 197

Cervical Margin Width - Lingual	
A	0.5 mm
B	< 0.5 mm but is explorer detectable OR > 0.5 mm to 1.0 mm
C	Feathered or not explorer detectable OR > 1.0 mm to 1.5mm
D	>1.5mm

Reference: page 228

Cervical Margin Width - Mesial	
A	0.5 mm
B	< 0.5 mm but is explorer detectable OR > 0.5 mm to 1.0 mm
C	Feathered or not explorer detectable OR > 1.0 mm to 1.5mm
D	>1.5mm

Reference: page 228



Cervical Margin Width - Distal	
A	0.5 mm
B	< 0.5 mm but is explorer detectable OR > 0.5 mm to 1.0 mm
C	Feathered or not explorer detectable OR > 1.0 mm to 1.5mm
D	>1.5mm

Reference: page 228

Axial Hard Tissue Removal - Facial	
A	1.5 mm to 2.0 mm.
B	1.0 mm to < 1.5 mm OR > 2.0 mm to 2.5 mm
C	0.5mm to < 1.0 mm
D	< 0.5 mm OR > 2.5 mm

Reference: page 227

Axial Hard Tissue Removal - Lingual	
A	0.6 mm to 1.0 mm
B	< 0.6 mm but visually perceptable OR > 1.0 mm to 2.0 mm
C	Not visually perceptable
D	> 2.0 mm

Reference: figure 9-1 (page 223)

Axial Hard Tissue Removal - Mesial	
A	0.6 mm to 1.0 mm
B	< 0.6 mm but visually perceptable OR > 1.0 mm to 2.0 mm
C	Not visually perceptable
D	> 2.0 mm

Reference: figure 9-1 (page 223)

Axial Hard Tissue Removal - Distal	
A	0.6 mm to 1.0 mm
B	< 0.6 mm but visually perceptable OR > 1.0 mm to 2.0 mm
C	Not visually perceptable
D	> 2.0 mm

Reference: figure 9-1 (page 223)

Axial Walls Smoothness / Evenness	
A	All walls are smooth and Even
B	Only three walls are smooth and Even
C	Only two walls are smooth and Even
D	Less than two walls are smooth and Even

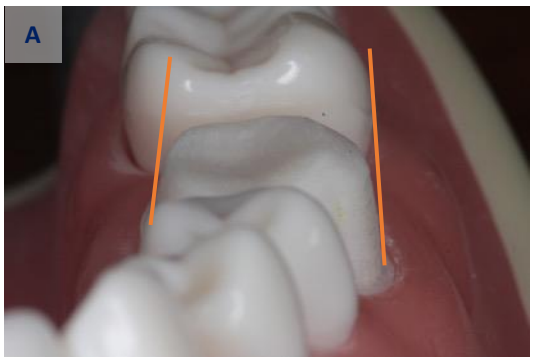
Reference: page 187

Axial Walls Undercuts	
A	There are no undercuts
B	There are some undercuts which can be blocked without affecting path of insertion or marginal intergrity of the final crown
C	-
D	There are some undercuts which will affect the path of insertion or which cannot be blocked without affecting marginal intergrity of the final crown

Reference: page 187

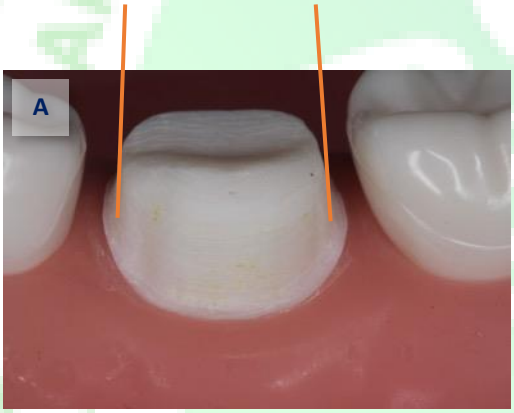
Taper Between Cervical 1/3 of Facial and Lingual Walls	
A	≅ 6° to 8° (3°to 4° Per Wall)
B	Nearly parallel to <6° (< 3° Per Wall) OR >8° to 16° (> 4°to 8° Per Wall)
C	> 16° to 24° (> 8°to 12° Per Wall)
D	> 24° (> 12° Per Wall) OR parallel walls / Inverse taper in any of the walls

Reference: page 188-189, page 231 figure 9-15, page 235
Reference: *Fundamental of Fixed Prosthodontics*
4th Edition, Herbert T. Shillingburg et al, Page 132, 133, Table 9-1



Taper Between Cervical 1/3 of Mesial and Distal Walls	
A	≅ 6° to 8° (3°to 4° Per Wall)
B	Nearly parallel to <6° (< 3° Per Wall) OR >8° to 16° (> 4°to 8° Per Wall)
C	> 16° to 24° (> 8°to 12° Per Wall)
D	> 24° (> 12° Per Wall) OR parallel walls / Inverse taper in any of the walls

Reference: page 188-189, page 231 figure 9-15, page 235
Reference: *Fundamental of Fixed Prosthodontics*
4th Edition, Herbert T. Shillingburg et al, Page 132, 133, Table 9-1



Occlusal Reduction - Functional & Non-Functional Cusps	
A	1.5 mm to 2.0 mm
B	≥ 1.0mm to <1.5mm OR > 2.0 mm to 3.0 mm
C	< 1.0 mm
D	> 3.0 mm

Reference: figure 9-15 (page 231)

Occlusal Reduction - Central Groove and Marginal Ridges	
A	1.5 mm to 2.0 mm
B	≥ 1.0mm to <1.5mm OR > 2.0 mm to 3.0 mm
C	< 1.0 mm
D	> 3.0 mm

Reference: page 235

Occlusal Reduction - Functional Cusp Bevel	
A	Approximately 45° to the long axis of the tooth
B	Deviates significantly from 45° to the long axis of the tooth
C	Functional cusp bevel is negligible
D	Functional cusp bevel is absent

Reference: figure 9-15 (page 231)

Line Angles - Transition Between Occlusal and Axial Surfaces	
A	Smooth transition on all aspects of the preparation
B	Smooth transition on some but not all aspects of the preparation
C	Smooth transition absent
D	Internal line angles and cusp tip areas are excessively sharp with no evidence of rounding

Reference: page 190

Condition of Adjacent Teeth	
A	No damage to the adjacent teeth
B	Damage to one or both adjacent teeth requiring smoothening only
C	Damage to one or both adjacent teeth requiring re-contouring
D	There is gross damage to adjacent tooth/teeth which requires a restoration.

Reference: page 169

All Ceramic Crown - Anterior Tooth - Preparation

Preparation Design:

Deep or “Heavy” Chamfer margins / Shoulder Required
Rounded internal angles
90° Margins

Primary Reference:
Contemporary Fixed Prosthodontics, Rosenstiel-Land-Fujimoto, First South Asia Edition

Grading Key:

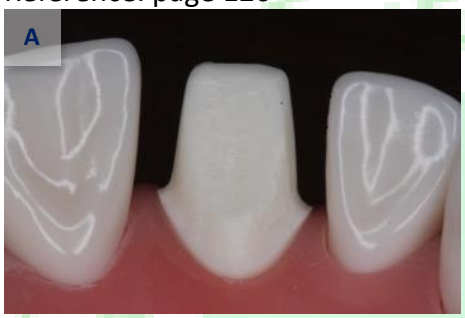
A = Exceeds minimal standard
B = Meets minimal standard
C = Below minimal standard
D = Critically below minimal standard / Not done

Facial Margin - Extension Relative to (Simulated) Free Gingival Margin	
A	At gingival margin OR Up to 0.5 mm below gingival margin
B	Up to 0.5 mm above gingival margin
C	> 0.5 mm above gingival margin OR > 0.5 mm to 1.0 below gingival margin
D	> 1.0 mm below gingival margin

Reference: page 126-128, 277

Lingual Margin - Extension Relative to (Simulated) Free Gingival Margin	
A	Up to 1mm above the gingival margin
B	At gingival margin or up to 0.5 mm below gingival margin OR > 1 mm and ≤ 2 mm above the gingival margin
C	> 0.5 mm to 1.0 below gingival margin OR > 2 mm above the gingival margin
D	> 1.0 mm below gingival margin

Reference: page 126



Mesial Margin - Extension Relative to (Simulated) Free Gingival Margin	
A	Up to 1mm above the gingival margin
B	At gingival margin or up to 0.5 mm below gingival margin OR > 1 mm and ≤ 2 mm above the gingival margin
C	> 0.5 mm to 1.0 below gingival margin OR > 2 mm above the gingival margin
D	> 1.0 mm below gingival margin

Reference: page 126

Distal Margin - Extension Relative to (Simulated) Free Gingival Margin	
A	Up to 1mm above the gingival margin
B	At gingival margin or up to 0.5 mm below gingival margin OR > 1 mm and ≤ 2 mm above the gingival margin
C	> 0.5 mm to 1.0 below gingival margin OR > 2 mm above the gingival margin
D	> 1.0 mm below gingival margin

Reference: page 126

Cervical Margin - Continuity	
A	Continuous around preparation
B	Continuous around preparation but lacks definition in areas
C	Continuous around preparation but "cupped" or "j-shaped" margins in areas
D	Not continuous around preparation

Reference: page 177

Cervical Margin - Smoothness	
A	Smooth all round the preparation
B	Smooth in the majority of areas
C	Smooth only in a minority or areas
D	Rough margin overall

Reference: page 177

Cervical Margin Width - Facial	
A	1.0 mm
B	0.5 mm to < 1.0 mm OR > 1.0 mm to 1.5 mm
C	< 0.5 mm OR > 1.5 mm to 2.0 mm
D	> 2.0 mm

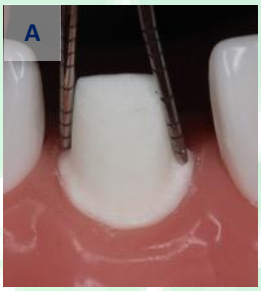
Reference: Pages 265, 277, figure 11-1

Cervical Margin Width - Lingual	
A	1.0 mm
B	0.5 mm to < 1.0 mm OR > 1.0 mm to 1.5 mm
C	< 0.5 mm OR > 1.5 mm to 2.0 mm
D	> 2.0 mm

Reference: Pages 265, 277

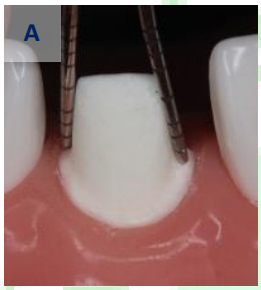
Cervical Margin Width - Mesial	
A	1.0 mm
B	0.5 mm to < 1.0 mm OR > 1.0 mm to 1.5 mm
C	< 0.5 mm OR > 1.5 mm to 2.0 mm
D	> 2.0 mm

Reference: Pages 265, 277



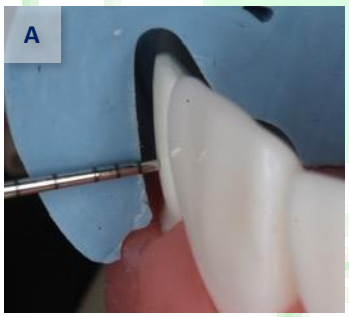
Cervical Margin Width - Distal	
A	1.0 mm
B	0.5 mm to < 1.0 mm OR > 1.0 mm to 1.5 mm
C	< 0.5 mm OR > 1.5 mm to 2.0 mm
D	> 2.0 mm

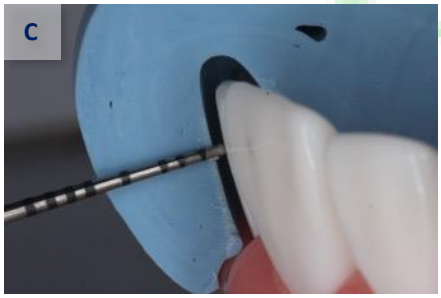
Reference: Pages 265, 277

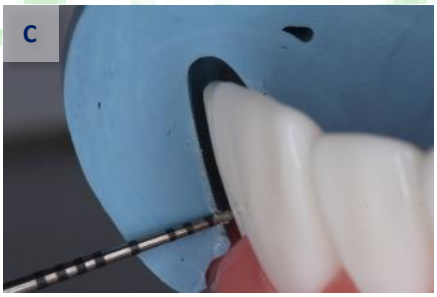


Axial Hard Tissue Removal - Facial	
A	1.0 mm to 1.5 mm.
B	> 1.5 mm to 2.0 mm
C	< 1.0 mm
D	> 2.0 mm

Reference: Pages 265, 277





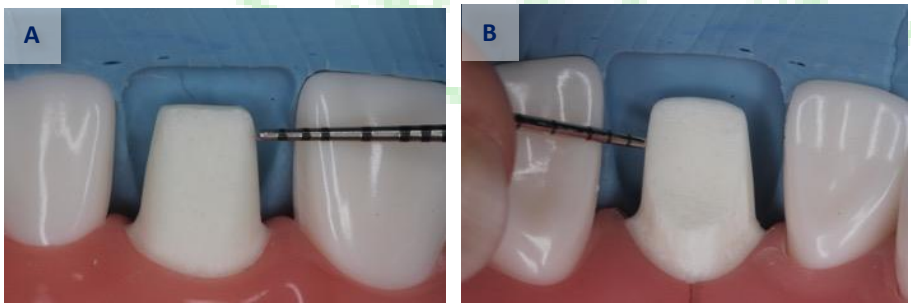


Axial Hard Tissue Removal - Lingual	
A	1.0 mm to 1.5 mm.
B	> 1.5 mm to 2.0 mm
C	< 1.0 mm
D	> 2.0 mm

Reference: Pages 265, 277

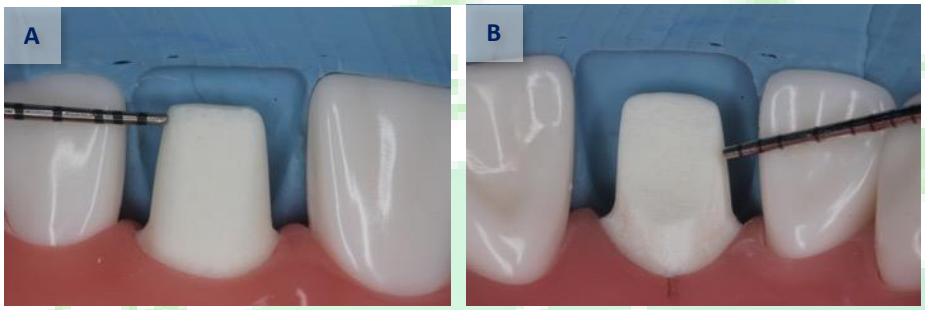
Axial Hard Tissue Removal - Mesial	
A	1.0 mm to 1.5 mm.
B	> 1.5 mm to 2.0 mm
C	< 1.0 mm
D	> 2.0 mm

Reference: Pages 265, 277



Axial Hard Tissue Removal - Distal	
A	1.0 mm to 1.5 mm.
B	> 1.5 mm to 2.0 mm
C	< 1.0
D	> 2.0 mm

Reference: Pages 265, 277



Axial Walls Smoothness & Evenness	
A	All walls are smooth & even
B	Only three walls are smooth & even
C	Only two walls are smooth & even
D	Less than two walls are smooth & even

Reference: Page 187

Axial Walls Undercuts	
A	There are no undercuts
B	There are some undercuts which can be blocked without affecting path of insertion or marginal intergrity of the final crown
C	-
D	There are some undercuts which will affect the path of insertion or which cannot be blocked without affecting marginal intergrity of the final crown

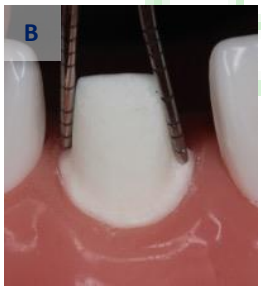
Reference: Page 187

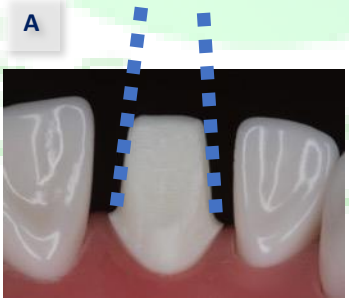
Taper Between Cervical 1/3 of Facial and Lingual Walls	
A	Nearly parallel to ≤ 10° (≤ 5° per wall)
B	> 10° to 15° (> 5° to 7.5° per wall)
C	> 15° to 20° (> 7.5° to 10° per wall)
D	>20° (> 10° per wall) OR Inverse taper

Reference: *Fundamental of Fixed Prosthodontics*
4th Edition, Herbert T. Shillingburg et al, Page 132, 133, Table 9-1

Taper Between Cervical 1/3 of Mesial and Distal Walls	
A	Nearly parallel to ≤ 10° (≤ 5° per wall)
B	> 10° to 15° (> 5° to 7.5° per wall)
C	> 15° to 20° (> 7.5° to 10° per wall)
D	>20° (> 10° per wall) OR Inverse taper

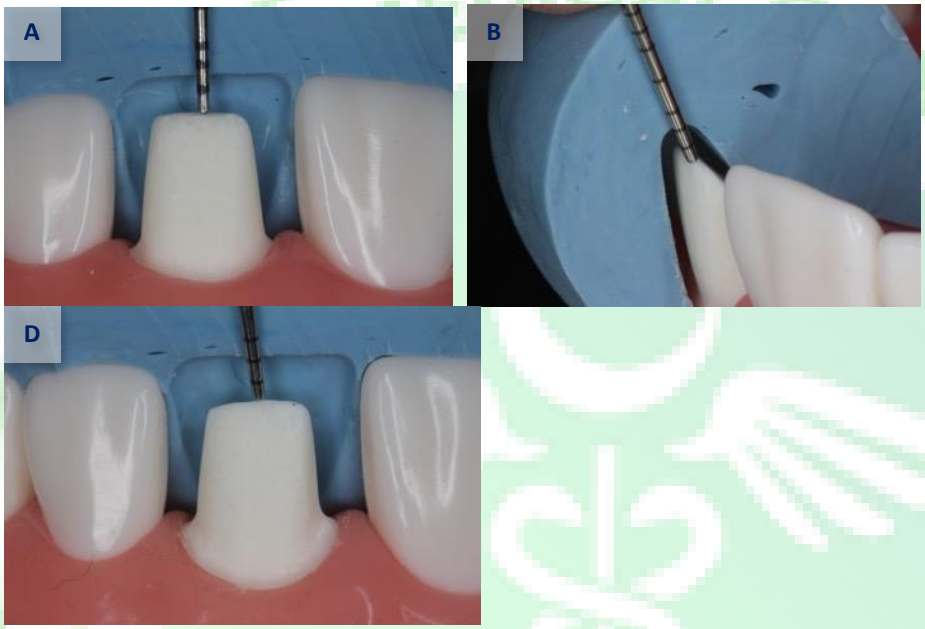
Reference: *Fundamental of Fixed Prosthodontics*
4th Edition, Herbert T. Shillingburg et al, Page 132, 133, Table 9-1





Incisal Reduction	
A	1.5 mm
B	≥ 1.0mm to <1.5mm OR > 1.5 mm to ≤ 2.0 mm
C	< 1.0 mm
D	>2.0 mm

Reference: Page 277



Line Angles - Transition Between Occlusal and Axial Surfaces	
A	Smooth transition on all aspects of the preparation
B	Smooth transition on some but not all aspects of the preparation
C	Smooth transition absent
D	Internal line angles and cusp tip areas are excessively sharp with no evidence of rounding

Reference: Page 190

Condition of Adjacent Teeth	
A	No damage to the adjacent teeth
B	Damage to one or both adjacent teeth requiring smoothening only
C	Damage to one or both adjacent teeth requiring re-contouring
D	There is gross damage to adjacent tooth/teeth which requires a restoration

Reference: Page 169

Rubber Dam Application for Single / Multiple Teeth Isolation

Notes:

- Floss may be used as required for rubber dam application
- Liquid Dam/Gingival Barrier material may not be used
- Any accepted clinical technique for rubber dam isolation may be used

References:

- *Endodontics Principles and Practice, Torabinejad-Fouad-Shabahang, Sixth Pakistan Edition, Pages 265-269*
- *Sturdevant's Art and Science of Operative Dentistry, Ritter-Boushell-Walter, Second South Asia Edition, Pages 211-232*

Grading Key:

A = Exceeds minimal standard
B = Meets minimal standard
C = Below minimal standard
D = Critically below minimal standard / Not done

Isolated Tooth	
A	Correct teeth isolated
B	-
C	-
D	Correct teeth not isolated

Selection of Retainer(s) (Clamp)	
A	Correct retainer(s) selected
B	Correct retainer(s) not selected but functionally acceptable
C	-
D	Correct retainer(s) not selected

Orientation of the rubber dam sheet on the Manikin Head/Typodont	
A	Rubber Dam Sheet appropriately centred with no risk of exposure of the oral cavity
B	Rubber Dam Sheet is not centred but there is no risk of exposure of the oral cavity
C	-
D	Rubber Dam Sheet significantly off center and there is risk of exposure of the oral cavity

Tears or inappropriate holes in the sheet	
A	None
B	Present, but isolation is not compromised
C	-
D	Present and compromising isolation

Tying of Floss on both sides of Retainer(s) (Clamps)	
A	The floss is knotted securely to both sides of every retainer used
B	
C	The floss is tied to both sides of every retainer used but is not knotted securely OR The floss is tied to only one side of any one or more of the retainers used
D	The floss is not tied to any one of the retainers used

Length of Floss used for tying to the Retainer(s) (Clamps)	
A	All floss pieces are of adequate length
B	
C	Any one of the floss pieces is too short
D	The floss is not tied to any one or more of the retainers used

Folds or Overstretching of Rubber Dam in between teeth	
A	None seen
B	Present, but isolation is not compromised
C	
D	Present, and isolation is compromised

A

Adaption of Rubber Dam at Cervical Region of Teeth	
A	Well adapted for all isolated teeth
B	-
C	Not well adapted for all isolated teeth, but isolation is not compromised
D	Isolation is compromised

D

Inversion of Rubber Dam at Cervical Region of Teeth	
A	Inverted for all isolated teeth
B	Inverted for some of the isolated teeth
C	Not inverted for any of the isolated teeth
D	-

Rubber Dam Adaptation on teeth with Retainers (Clamps)	
A	The rubber dam is secured on all teeth with retainers(and reflected away from retainer wings if retainers with wings are used)
B	
C	
D	The rubber dam is not secured on any one or more of the teeth with retainers (or reflected away from retainer wings if retainer with wings are used)

Anterior Endodontic Procedure - Access Opening

References:

Endodontics Principles and Practice, Mahmoud Torabinejad, Ashraf F. Fouad, Shahrokh Shabahang, Sixth Edition (Special Pakistan Edition), Chapter 13

Grading Key:

A = Exceeds minimal standard
B = Meets minimal standard
C = Below minimal standard
D = Critically below minimal standard / Not done

Placement of Access Opening	
A	Is directly over the pulp chamber and allows removal of pulp horns and debridement of the pulp chamber
B	Is not directly over the pulp chamber, but allows removal of pulp horns and debridement of the pulp chamber
C	-
D	Is not over the pulp chamber and does not allow removal of pulp horns and debridement of the pulp chamber

Size of Access Opening	
A	Is optimal, allowing removal of pulp horns and debridement of the pulp chamber while conserving tooth structure
B	Is slightly over or under extended but allows removal of pulp horns and debridement of the pulp chamber
C	-
D	The size of the access opening is too small and does not allow removal of pulp horns and debridement of the pulp chamber OR The tooth structure is grossly damaged

Straight Line Access to Cervical 1/3 of Canal	
A	Achieved
B	-
C	Not achieved
D	-

Damage to Pulp Chamber Walls and Floor	
A	No undue damage
B	Minor damage only
C	Significant damage but there is no perforation of the pulp chamber
D	There is perforation of the pulp chamber

Anterior Endodontic Procedure - Canal Instrumentation

References:

Endodontics Principles and Practice, Mahmoud Torabinejad, Ashraf F. Fouad, Shahrokh Shabahang, Sixth Edition (Special Pakistan Edition), Chapter 14

Grading Key:

A = Exceeds minimal standard
B = Meets minimal standard
C = Below minimal standard
D = Critically below minimal standard / Not done

Cervical 2/3 of Canal - Taper	
A	Canal is shaped to a continuous taper
B	Canal is tapered but the taper is not continuous
C	There is no taper OR the canal is over prepared
D	There is perforation of the canal

Cervical 2/3 of Canal - Smoothness of Walls	
A	Canal walls are smooth throughout
B	Canal walls are smooth only in some areas
C	Canal walls are rough and irregular
D	There is perforation of the canal

Apical 1/3 of Canal - Length	
A	The canal is prepared to the specified length
B	The canal is prepared short of the specified length by ≤ 2mm
C	The canal is prepared short of the specified length by > 2mm
D	The canal is prepared beyond the specified length OR Lacks an apical stop

Apical 1/3 of Canal - Diameter	
A	Optimally prepared to specified diameter
B	Under-prepared
C	Over-prepared but there is no perforation
D	There is an apical perforation

Anterior Endodontic Procedure - Obturation

References:

Endodontics Principles and Practice, Mahmoud Torabinejad, Ashraf F. Fouad, Shahrokh Shabahang, Sixth Edition (Special Pakistan Edition), Chapter 15

Grading Key:

A = Exceeds minimal standard
B = Meets minimal standard
C = Below minimal standard
D = Critically below minimal standard / Not done

Apical Obturation with Gutta Percha	
A	Obturated to the specified length
B	Obturated to ≤ 1mm short of the specified length
C	Obturated to > 1mm but ≤ 2mm short of the specified length
D	Obturated to > 2.0 mm short of the specified length OR Beyond the specified length

Voids in Gutta Percha	
A	The obturation in the root canal is dense and without voids.
B	The obturation in the root canal system has minor voids in less than half of the length
C	The obturation in the root canal system has minor voids in more than half of the length
D	The obturation in the root canal system has major voids

Separated Endodontic Instrument in The Root Canal System	
A	None
B	Present but does not affect obturation
C	-
D	Present and prevents obturation or allows obturation at a critically deficient level

Gutta Percha Severed at CEJ / Sealer in Pulp Chamber	
A	Gutta Percha severed at CEJ and the chamber is clear of endodontic sealer
B	Gutta Percha severed at the CEJ level but pulp chamber contains endodontic sealer
C	Gutta Percha has been severed significantly below the CEJ
D	Gutta Percha is extending into the pulp chamber

Posterior Endodontic Procedure - Access Opening

References:

Endodontics Principles and Practice, Mahmoud Torabinejad, Ashraf F. Fouad, Shahrokh Shabahang, Sixth Edition (Special Pakistan Edition), Chapter 13

Grading Key:

A = Exceeds minimal standard
B = Meets minimal standard
C = Below minimal standard
D = Critically below minimal standard / Not done

Placement of Access Opening	
A	Is directly over the pulp chamber and allows removal of pulp horns and debridement of the pulp chamber
B	Is not directly over the pulp chamber, but allows removal of pulp horns and debridement of the pulp chamber
C	-
D	Is not over the pulp chamber and does not allow removal of pulp horns and debridement of the pulp chamber

Size of Access Opening	
A	Is optimal, allowing removal of pulp horns and debridement of the pulp chamber while conserving tooth structure
B	Is slightly over or under extended but allows removal of pulp horns and debridement of the pulp chamber
C	-
D	The size of the access opening is too small and does not allow removal of pulp horns and debridement of the pulp chamber OR The tooth structure is grossly damaged

Straight Line Access to Cervical 1/3 of Root Canal System	
A	Achieved for all canals
B	Not achieved for some canals
C	-
D	Not achieved for any canal

Damage to Pulp Chamber Walls and Floor	
A	No undue damage
B	Minor damage only
C	Significant damage but there is no perforation of the pulp chamber
D	There is perforation of the pulp chamber

Contributors & Reviewers:

Dr. Salman Ashraf Khan
BDS, FRACDS
Associate Professor of Operative Dentistry
Visiting Consultant Dental Surgeon SKMCH&RC

Dr. Sarosh Ehsan
BDS, FCPS, ICMT
Associate Professor of Operative Dentistry
Head of department, Operative Dentistry
Fatima Memorial Hospital - College of Dentistry
Lahore

Dr. Syed Yawar Ali Abidi
BDS, FCPS
Professor of Operative Dentistry
Head of Operative Dentistry
Dean Faculty of Dentistry
Jinnah Sindh Medical University

Dr. Tayyaba Saleem
BDS, FCPS, MSc
Professor of Prosthodontics
Head of Prosthodontics
Islamabad Medical & Dental College
Islamabad

Dr. Muhammad Afzal
BDS, FCPS
Associate Professor of Prosthodontics
Institute of Dentistry
CMH Lahore Medical College

Dr Usman Sana
BDS, FCPS
Assistant Professor/HOD, Pediatric Dentistry
Azra Naheed Dental College, Superior University, Lahore.

Dr. Adeela Rafique
BDS, MSc Restorative Dentistry
Associate Professors Operative Dentistry
Fatima Memorial Hospital - College of Dentistry
Lahore

Dr. Samir R. Qazi
BDS, FFDRCSI, MPhil

Professor of Oral & Maxillofacial Surgery
Oral Surgeon
Dr. Qazi & Associates, Lahore

Dr. Abid Ashar
BDS, FDSRCS, MCPS-HPE
Professor of Oral & Maxillofacial
Principal Fatima Memorial Hospital - College of Dentistry
Lahore

Dr Nabeel Zahid
BDS, MFDS RCSEd (UK), M Endo RCSEd (UK)
Assistant Professor/Head of Department Endodontics
Azra Naheed Dental College
Superior University, Lahore

Dr. Noor-ul-Ain Khan
BDS, MSc Endodontics

Dr. Nadia Omar
BDS, FCPS Operative Dentistry

Dr. Saima Azam
BDS, FCPS
Professor of Operative Dentistry
Head of Department of Operative Dentistry
Islamabad Medical & Dental College
Islamabad

Dr. Haroon Shahid Qazi
BDS, MS, MCPS-HPE, FACD
Professor & Head of Orthodontic Department,
Principal, (Dental Section) Islamabad Medical and Dental College,
Islamabad

Dr. Ambreen Afzal
(Member Academic Board, PMC)
BDS, FCPS, C.Ortho
F-TMJ, OFOS, M ORTH RCS, MCPS HPE
Professor of Orthodontics
Councilor College of Physicians & Surgeons Pakistan

Dr. Kashif Ikram
FDSRCS(Eng). FFDRCS(Ire) FICOI(USA) CHPE(BMU)
Professor of Oral & Maxillofacial Surgery
Principal Baqai Dental College
Baqai Medical University Karachi

Copy-Editing:

Dr. Sidra Haleem, BDS

Photography:

Dr. Noor-ul-Ain Khan, BDS, MSc

Coordination and Compilation:

Dr. Saqib Riaz Qazi
BDS, MS Restorative Dentistry
Member Academic Board, PMC

Mauve Area, G-10/4, Islamabad
Tel: (051) 910 6172
info@pmc.gov.pk