

## **Assessment Criteria and Marking Scheme for the Competency Assessment in MD Restorative Dentistry**

### **PGIM MD in Restorative Dentistry Programme**

#### **Competency Assessment:**

##### **Procedure - Cast surveying and designing of removable partial dentures**

##### **Main Steps/Areas of evaluation**

1. Patient assessment and gathering of information (15%)
2. Surveying of Upper and Lower casts (25%)
3. Designing of upper and lower partial dentures (40%)
4. Final discussion (20%)

**A candidate is expected to score a minimum of 50% (with a minimum mark of 40% for each of the four steps)**

**Evaluation Sheet**

**Procedure: Cast surveying and designing of removable partial denture**

**Index Number:**

<b>1) <u>Patient assessment and gathering of information</u></b>	Yes	No	Marks (Out of)
i) Relevant History			(20%)
ii) Extra oral and intra oral examination			(40%)
iii) Radiological assessment			(20%)
iv) Assessment of Articulated casts			(10%)
v) Diagnosis			(10%)
<b>Comments</b>			<b>Total marks</b>

<b>2) <u>Surveying of Upper and Lower casts</u></b>	Yes	No	Marks (Out of)
i.) Visual Analysis of cast			(10%)
ii) Selection of most Advantageous path-use of analysing Rod  Path of insertion and path of removal			(20%)
iii).Surveying casts in horizontal plane Mount cast on Zero tilt Use of carbon marker-marking survey line Use of undercut gauge-undercut depth Marking of horizontal undercut Trypoding			(70%)
<b>Comments</b>			<b>Total marks</b>

<b><u>3. Designing of upper and lower partial dentures</u></b>  <b>Draw a design on design sheet and duplicate it on to the cast</b>	Yes	No	Marks  (Out of)
i) Design of support  Rest location ,use, number and type			(20%)
ii) Design of minor connectors and guiding planes			(20%)
iii) Design of major connector			(20%)
iv) Design of direct retainers  Clasps type ,number and location			(20%)
v) Design of stability  Bracing and reciprocation  Indirect retention  Denture base connector( saddle)			(10%)
vi) Overview  Simplicity, gingival clearance, effective tooth support			(10%)
<b>Comments</b>			<b>Total marks</b>

<b><u>4. Final discussion</u></b>	Yes	No	Marks (Out of)
i) Appropriate mouth preparation  Rest seat, guiding planes, and conservative, surgical and periodontal prep.			(60%)
ii) Any modification			(10%)
iii) Justification to the final design			(30%)
<b>Comments</b>			<b>Total Marks</b>

Steps	Marks (%)	Average mark (%)
1)		
2)		
3)		
<b>Total</b>		<b>Good Pass/Pass/Fail</b>

[Good Pass = 65% and above, Pass = 50%-64%, Fail = Below 50%]

<b>Name and Signature of Examiner</b>	<b>Name and Signature of Examiner</b>

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## **PGIM MD in Restorative Dentistry Programme**

### **Competency Assessment:**

**Procedure - Impression taking with a custom tray for an edentulous patient**

#### **Main Steps/Areas of evaluation**

1. Custom tray (20%)
2. Border moulding with modelling compound (40%)
3. Final Impressions (40%)

**A candidate is expected to score a minimum of 50% (with a minimum mark of 40% for each of the three steps)**

## Evaluation Sheet

**Procedure: Impression taking with a custom tray for an edentulous patient**

**Index Number:**

**Date & Duration of Assessment:**

<b>1a. Custom tray( Maxillary)</b>	<b>Yes</b>	<b>No</b>	<b>Marks (Out of)</b>
i) Correct prescription of custom tray according to clinical situation  Tray type  Tray material			(20%)
ii) Acceptability of custom tray  Extension  Stability  Thickness  Borders  Handle  Relief areas			(80%)
<b>Comments</b>			<b>Total marks</b>

<b>1b. Custom tray(Mandibular)</b>	Yes	No	Marks (Out of)
i) Correct prescription of custom tray according to clinical situation  Tray type  Tray material			(20%)
ii) Acceptability of custom tray  Extension  Stability  Thickness  Borders  Handle  Relief areas			(80%)
<b>Comments</b>			<b>Total marks</b>



<b>2a. Border moulding with modelling compound-Maxillary tray</b>	Yes	No	Marks (Out of)
i) Try the custom tray in the mouth  Correct extension if needed			(10%)
ii) Check List <ul style="list-style-type: none"> <li>• Tray stays in place at rest and during slight manipulation of tissues</li> <li>• Tray exhibits firm suction when an attempt is made to remove it</li> <li>• Labial and buccal flanges extend into height of vestibule</li> <li>• No tray is showing through border molding</li> <li>• Flange thickness generally no greater than 4-5 mm (unless severely resorbed)</li> <li>• Patient feels no areas of discomfort</li> <li>• Posterior palatal seal is properly covered</li> <li>• Frenal areas properly contoured</li> <li>• Flanges smooth, continuous; rolled and not sharp</li> <li>• Flanges relatively symmetrical on contralateral sides</li> </ul>			(90%)
<b>Comments</b>			<b>Total marks</b>

<b>2b. Border moulding with modelling compound-Mandibular tray</b>	Yes	No	Marks (Out of)
iii) Try the custom tray in the mouth  Correct extension if needed			(10%)
iv) Check List <ul style="list-style-type: none"> <li>• Tray stays in place at rest and during slight manipulation of tissues</li> <li>• Tray is relatively stable when a vertical force is applied</li> <li>• No tray is showing through border molding</li> <li>• Flange thickness generally no greater than 4-5 mm</li> <li>• Patient feels no areas of discomfort</li> <li>• Labial and buccal flanges extend into depth of vestibule</li> <li>• Frenular areas properly contoured</li> <li>• Flanges smooth, continuous; rolled and not sharp</li> <li>• Flanges relatively symmetrical on contralateral sides</li> <li>• Covers retro-molar pads</li> <li>• Lingual flanges at or slightly below mylohyoid ridges</li> <li>• Posterior extensions of lingual flanges extends into retromylohyoid spaces</li> </ul>			(90%)
<b>Comments</b>			<b>Total marks</b>

<b>3a. Final Impressions -Maxillary Arch</b>	Yes	No	Marks
Potential Impression Materials  Irreversible hydrocolloid, Zinc oxide and eugenol, Polysulfides, Silicones, Polyether			(Out of)
i) Impression technique  Patient instruction  Patient preparation  Proper manipulation of material  Chair position  Operators position  Proper insertion and removal of tray  Handling of an impression( disinfection,storage)			(40%)
ii) Check List <ul style="list-style-type: none"> <li>• Post-palatal seal area recorded (vibrating line &amp; displaceable tissue outline)</li> <li>• Peripheries covered by a thin layer of impression material (.5-1 mm)</li> <li>• No significant voids</li> <li>• Impression is stable and retentive when moderate pressure is applied to the canine region</li> <li>• Accurately records available supporting structures</li> <li>• Flanges smooth, continuous; rolled and not sharp</li> <li>• Flanges relatively symmetrical on contralateral sides</li> </ul>			(60%)
<b>Comments</b>			<b>Total marks</b>

<b>3b. Final Impressions –Mandibular arch</b>	Yes	No	Marks
<p>Potential Impression Materials</p> <p>Irreversible hydrocolloid, Zinc oxide and eugenol, Polysulfides, Silicones, Polyether</p>			(Out of)
<p>iii) Impression technique</p> <p>Patient instruction</p> <p>Patient preparation</p> <p>Proper manipulation of material</p> <p>Chair position</p> <p>Operators position</p> <p>Proper insertion and removal of tray</p> <p>Handling of an impression( disinfection,storage)</p>			(40%)
<p><b>Check List</b></p> <ul style="list-style-type: none"> <li>• Peripheries covered by a thin layer of impression material (.5-1 mm)</li> <li>• No significant voids</li> <li>• Impression is stable with tongue at rest when moderate unseating pressure is applied</li> <li>• No significant areas of "burn through" (distortion of the contours of the surrounding tissue)</li> <li>• Accurately records available supporting structures</li> <li>• Flanges smooth, continuous; rolled and not sharp</li> </ul>			(60%)
<b>Comments</b>			<b>Total marks</b>

<b>Steps</b>	<b>Marks (%)</b>	<b>Average mark (%)</b>
1)		
2)		
3)		
<b>Total</b>		<b>Good Pass/Pass/Fail</b>

[Good Pass = 65% and above, Pass = 50%-64%, Fail = Below 50%]

<b>Name and Signature of Examiner</b>	<b>Name and Signature of Examiner</b>

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# PGIM MD in Restorative Dentistry Programme

## Competency Assessment

### Procedure: Endodontic treatment of a molar tooth

Allocated time duration: 2 hours

#### Main steps/ Areas of evaluation

- 1) Patient and tooth selection (10 marks)
- 2) Placement of rubber dam (15 marks)
- 3) Access cavity preparation (25 marks)
- 4) Working length assessment and canal preparation (25 marks)
- 5) Final obturation (25 marks)

**A candidate is expected to score a minimum of 50% (with a minimum mark of 40% for each of the five steps)**

#### **1. Patient and tooth selection (10 marks)**

	<b>YES</b>	<b>NO</b>
Indication for endodontics and suitability of patient		
Restorability and long term prognosis		
Need for removal of existing poor restorations or caries and a suitable restoration		
Appropriate anaesthesia		
Comments	<b>Total marks</b>	

## 2. Placement of rubber dam (15 marks)

	YES	NO
Appropriate clamp		
Stable clamp		
Attachment of floss to clamp		
Appropriate placement of rubber dam		
Dam and frame positioned for optimal access, safety, moisture control and patient comfort		
Dam or frame positioning needs minor adjustments for access, safety , moisture control		
Rubber dam placement started again		
Trauma to gingiva or teeth noticed after removal of dam		
<b>Comments</b>	<b>Total marks</b>	

## 3. Access cavity preparation (25 marks)

	YES	NO
Optimal outline form to provide appropriate removal of pulp horns		
Straight line access to all canals		
Optimal removal of unsupported tooth structure with tapered walls		
Complete removal of Caries		
Excessive removal of internal tooth structure		
Damage to floor perforation		
Slightly over-tapered internal walls		
Smooth walls and surface		
<b>Comments</b>	<b>Total marks</b>	

**4. Working length assessment and canal preparation (25 marks)**

	<b>YES</b>	<b>NO</b>
Use of apex locator		
Correct assessment of working length using radiograph		
Extrusion of files on working length radiograph		
Canal preparation		
Instrument separation/ accidents		
Irrigation material		
Tug back action at working length		
Appropriate MAF selection		
<b>Comments</b>	<b>Total marks</b>	

**5. Final obturation (25 marks)**

	<b>YES</b>	<b>NO</b>
Trial GP radiograph demonstrating good length and taper		
Need for additional radiograph		
Transportation of apex		
Final obturation radiograph		
<b>Comments</b>	<b>Total marks</b>	



<b>Main steps</b>	<b>Marks (%)</b>	<b>Average mark (%)</b>
1)		
2)		
3)		
4)		
5)		
<b>Total</b>		<b>Good Pass/Pass/Fail</b>

**(Good pass =65% and above, Pass = 50%-64%, Fail =Below 50%)**

<b>Name and Signature of Examiner</b>	<b>Name and Signature of Examiner</b>

**Date: .....**

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# **PGIM MD in Restorative Dentistry Programme**

## **Competency Assessment**

**Procedure: Preparation, impression taking and temporisation of a Porcelain Fused to Metal (PFM) complete crown on an anterior tooth**

Allocated time duration: 2 hours

### **Main steps/ Areas of evaluation**

- 1) Assessment of patient and tooth (10 marks)
- 2) Tooth preparation - stage I (30 marks)
- 3) Tooth preparation – stage II (30 marks)
- 4) Impression taking (10 marks)
- 5) Provisional crown (20 marks)

**A candidate is expected to score a minimum of 50% (with a minimum mark of 40% for each of the five steps)**

### **1. Assessment of patient and tooth (10 marks)**

	<b>YES</b>	<b>NO</b>
Assessment of patient and tooth		
<b>Comments</b>	<b>Total marks</b>	

**2. Tooth preparation - stage I (30 marks)**

	<b>YES</b>	<b>NO</b>
Optimal path of insertion following contour of tooth		
No undercuts		
Appropriate taper		
Optimal preparation to allow for fabrication of an aesthetic and functional restoration		
Any damage to adjacent teeth		
Reduction 1.2-1.5 mm buccal , mesial and distal , 0.5 mm lingual and 2-3 mm incisal		
<b>Comments</b>	<b>Total Marks</b>	

**3. Tooth preparation – stage II (30 marks)**

	<b>YES</b>	<b>NO</b>
Margin is 0.5 mm supra –gingival		
Margin is smooth , continuous and identifiable		
Margin is 1.2 -1.5 mm wide on the buccal margin and 0.5 -1.0mm wide on the lingual margin		
Ddebris		
Any damage to gingiva		
<b>Comments</b>	<b>Total marks</b>	
<b>Total marks</b>		

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**4. Impression taking (10 marks)**

	<b>YES</b>	<b>NO</b>
Air bubbles		
Accuracy		
Coverage		
<b>Comments</b>	<b>Total marks</b>	

**5. Provisional crown (20 marks)**

	<b>NO</b>	<b>YES</b>
Well-fitting margins		
Good contour		
Occlusal interference		
Smooth and void free		
Clean cementation		
<b>Comments</b>	<b>Total marks</b>	

<b>Main steps</b>	<b>Marks (%)</b>	<b>Average mark (%)</b>
1)		
2)		
3)		
4)		
5)		
<b>Total</b>		<b>Good Pass/Pass/Fail</b>

**(Good pass =65% and above, Pass = 50%-64%, Fail =Below 50%)**

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## PGIM MD in Restorative Dentistry Programme Competency Assessment

### Procedure: Pulpotomy or a Pulpectomy of primary molar tooth

Main Steps / Areas of evaluation

Allocated time duration: 2 hours

- 1) Justification for the Pulpotomy or Pulpectomy of primary molar tooth in a given patient (Case Selection/Suitability for the procedure) 10%
- 2) Overall management of the patient with arrangement of required instruments and material prior to the procedure 15%
- 3) Initiation of the pulpotomy/ pulpectomy procedure (total removal caries , use of appropriate burs) 15%
- 4) Completion of Pulpotomy / Pulpectomy Procedure (Steps involve in pulpotomy/ pulpectomy – Gain access to the pulp chamber, total removal of coronal pulp/ both coronal and radicular pulp, treat the pulp/ root canal with suitable medicament) 40%
- 5) Completion of Crown restoration(GIC/ Composite/stainless steel crowns) 20%

**A candidate is expected to score a minimum of 50% (with a minimum mark of 40% for each of the five steps)**

***N.B. The procedure should be carried out under rubber dam isolation. However under exceptional circumstances the procedure could be performed without a rubber dam.***

#### 1. Justification for the Pulpotomy or Pulpectomy

Justification for the Pulpotomy or Pulpectomy of primary molar tooth in a given patient	Yes	No	Marks
1. Clinical findings which supportive of the procedure			25%
2. Radiological findings which supportive of the procedure			25%
3. Selection of the type of the pulp therapy procedure			50%
Comments			

## 2. Arrange the patient, Instruments & materials

Arrange the patient for the procedure and arrangement of required instruments and material prior to the procedure	Yes	No	Marks
1. Introduction of local anaesthesia along with surface anaesthesia			25%
2. Use of necessary behaviour management methods			25%
3. Arrangement of necessary materials			25%
4. Arrangement of necessary instruments			25%
Comments			

## 3. Initiation of the pulpotomy/ pulpectomy procedure

Initiation of the pulpotomy/ pulpectomy procedure	Yes	No	Marks
1. Check for anaesthesia			25%
2. Removal of caries			25%
3. Access to the pulp chamber			25%
4. Evaluate the pulp condition and plan the rest of the procedure			25%
Comments			

#### 4. Completion of Pulpotomy / Pulpectomy Procedure

Completion of Pulpotomy / Pulpectomy Procedure	Yes	No	
1. If pulp is vital – procedure the pulpotomy  Total removal of the coronal pulp, Application of Suitable medicament Placement of ZOE lining			100
2. If pulp is non- vital  Working length estimation with pre-op radiograph and pulp tester  Clean the canals  Irrigate the canals with NaOCl  Restore root canals with ZOE/Ca(OH) <sub>2</sub>  Placement of ZOE lining			100
If patient become uncooperative due to pain desensitizing / devitalizing the pulp introducing two visit pulp therapy produce			100
Comments			

#### 5. Completion of Crown restoration

Completion of Crown restoration with GIC/ Composite/stainless steel crowns	Yes	No	
1. Selection of the material			25%
2. Placement of the restoration			25%
3 . Finishing of the restoration			50%
Comments			



Steps	Marks (%)	Average mark (%)
1)		
2)		
3)		
4)		
5)		
<b>Total</b>		<b>Good Pass/Pass/Fail</b>

<b>Name and Signature of Examiner</b>	<b>Name and Signature of Examiner</b>

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## **PGIM MD in Restorative Dentistry Programme**

### **Competency Assessment:**

#### **Procedure - Periodontal Flap Surgery (Premolar/Molar region)**

##### **Main Steps/Areas of evaluation**

- 1) Justification for a Flap Surgery in the given patient/teeth concerned (20%)
  
- 2) Use of required equipment, instruments, material throughout the entire procedure (20%)
  
- 3) Flap management (use of appropriate incisions, extensions, flap reflection and handling) (20%)
  
- 4) Debridement and defect-handling (20%)
  
- 5) Flap Closure (suturing, dressing, haemostasis, post-operative instructions) (20%)

**A candidate is expected to score a minimum of 50% (with a minimum mark of 40% for each of the five steps)**

***N.B. If defect filling with bone is required the candidate would be given additional time to complete the procedure***

## Evaluation Sheet

### Procedure: Periodontal Flap Surgery

Index Number:

Date & Duration of Assessment:

<b>1) Justification for a Flap Surgery in the given patient/teeth</b>	Yes	No	Marks (Out of)
i) Pre-requisite: (Has the patient been prepared adequately through non-surgical care?)  [As evident in the patient's records, patient's history, and clinically]			(25%)
ii) Is the surgical procedure justified in this patient/this situation/on the selected tooth or teeth? (Could one anticipate a significant difference in the outcome with the planned procedure?)			(25%)
iii) Has the patient been adequately informed of the planned procedure/ its benefits / complications before hand?  (Informed Consent)			(25%)
iv) Immediate pre-operative preparation (Has the patient been prepared well to undergo the procedure in this visit?)			(25%)
Comments			Total marks

<b>2) Use of required equipment, instruments, material (overall handling of instruments and the patient)</b>	Yes	No	Marks (Out of)
i) Correct chair positions (patient, operator) and adequate setting up for the procedure? (accessibility for instrument trays, equipment, patient records etc)			(25%)
ii) Administering local anaesthesia: Is the overall quality of delivery of anaesthesia satisfactory? (Safe handling of the needle, aspiration, patient assurance, obtaining anaesthesia etc)			(25%)
iii) Correct use of instruments: Whether the correct instruments were used for the correct steps? [Overall quality and appropriateness of the instruments used during the entire procedure]  <ul style="list-style-type: none"> <li>• Bone Sounding?</li> <li>• Placing incisions?</li> <li>• Flap reflection?</li> <li>• Debridement?</li> <li>• Flap replacement?</li> <li>• Suturing?</li> <li>• Surgical dressing?</li> </ul>			(50%)
Comments			Total marks

<b>3) Flap management (use of appropriate incisions, extensions, careful flap-handling)</b>	Yes	No	Marks (Out of)
i) Were the incisions and their extensions appropriate?			(35%)
ii) Is the access adequate? If not whether measures were taken to improve access?			(35%)
iii) Is the overall quality of flap refection satisfactory			(30%)
Comments			Total marks

<b>4) Debridement and defect-handling (quality and the pace will be considered)</b>	Yes	No	Marks (Out of)
i) Is the quality of debridement satisfactory?			(35%)
ii) Is clearing the field adequate? (proper irrigation for visibility)			(20%)
iii) Was the defect adjudged correctly? (Examiner will need to question on the nature of the defect, prognosis, whether defect filling is required or not?)			(35%)
iv) Is the overall outcome of defect-handling satisfactory?			(10%)
Comments			Total marks

<b>5) Flap Closure (suturing, dressing, haemostasis, post-operative instructions)</b>	Yes	No	Marks (Out of)
i) Is haemostasis satisfactory?			(20%)
ii) Is suturing satisfactory? (quality and speed)			(30%)
iii) Is overall flap/wound closure satisfactory?			(25%)
iii) Are post-operative approach and instructions satisfactory?			(25%)
Comments:			Total marks

Steps	Marks (%)	Average mark (%)
1)		
2)		
3)		
4)		
5)		
<b>Total</b>		<b>Good Pass/Pass/Fail</b>

[Good Pass = 65% and above, Pass = 50%-64%, Fail = Below 50%]

<b>Name and Signature of Examiner</b>	<b>Name and Signature of Examiner</b>

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