Subject Operative Dentistry **instructor: Mr. Usman**

Midterm Assignment **30 Marks**

Department AHS **Semester DT 6th**

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Attempt all questions, all questions carry equal marks.

Q1. Differentiate

- Three quarter crown
- Metal ceramic crown
- Seven eighth crown

Ans: **part A:**

(Three quarter crown)

The three quarter crown was introduced to the profession in 1901 by Carmichael and is even today referred to in some schools as 'The Carmichael Crown'. It has several good features;

- (1) It is easier to seat than a full veneer crown,
- (2) It is possible to check vitality subsequently,
- (3) There is less destruction of tooth tissue,
- (4) Aesthetics are more easily maintained.

The three-quarter crown on a posterior teeth probably one of the most demanding of all tooth preparations. As with such preparations on other teeth, on a posterior molar it involves the proximal and lingual surfaces and leaves the facial surface intact.
They are always made of cast metal.

Difference:

1)they cover forth-fifth of the tooth surface buccal surface remain intact.

2)they are retained by grooves on mesial, distal and occlusal surface.

3)they are always made up of cast metal.

Part B:

(Metal ceramic crown)

These restorations are made using either a gold or "white" (silver-colored) dental alloy. They're known for their great strength and exceptional durability.

Difference:

- Dental porcelain can be bounded to a variety of metal alloy such us gold,silver,nickel etc.
- It can be tolerate heavy bite force as well as chewing force.
- They are very durable and costly.
- Good aesthetic

PART C:

(Seven eighty crown)

The seven-eighths crown preparation includes, in addition to the surfaces covered by the three-quarter crown, the distal half of the buccal surface. Therefore the mesial aspect of this preparation resembles that for a three-quarter crown; the distal aspect resembles that for a complete crown.

Difference:

- Cover all the mesial buccal cusp of the upper molar tooth.
- Retained by intercoronal features adhesive techniques.
- Used in maxillary molar and pre-molars it encompasses seven eight the gingival circumference of the tooth.

Q3. Define veneer, explain direct and indirect veneer technique?

Ans: <u>Veneer:</u>

A veneer is a layer of tooth colour material that is applied to a tooth to restore localize defect and intransic discoloration .Alternately known as dental laminate

❖ **<u>Direct veneers technique :</u>**

These defect can be restore in one visit by light cured.

❖ **Steps:**

- Cleaning
- Shade selection
- Isolation
- Removal of the defect and tooth preparation dept 0.5 to 0.7 mm.
- Etching
- Restore of the cavity with composit resin.

❖ **Indirect veneer technique:**

Two appointments are required for this.

❖ **Steps:**

1)First appointment

- Veneers preparation procedure.
- Shade selection
- Tooth preparation
- Impression
- Temporary veneers.

2nd appointment

- Remove temporary veneers.
- Clinical try in.
- Cementation.

Q5. Briefly explain composite and porcelain veneer?

Ans: composit veneers:

- On visit procedures.
- Less expensive
- Repairs potentials
- Chair-side controll of the anatomy.
- Minimal irriversable lose of the tooth structure.
- Can be built up in the mouth by directly placing it.
- Can be fibricated in the dental laboratories.

Porcelain veneer:

- Esthatic stability
- Stain resistant
- Stronger and durable
- Gum tissur tolerate porcelian well
- The colour of the porcelain veneer can be selected such that dark teeth appear whiter.
- Veneer offer a conservative approach to change the tooth colour and shape.
- Can't be built in mouth.
- Hence fabricated out side and fitted later.

Indications:

- Esthatically compromised anterior teeths
- Poorly shaped ir crooked teeth.
- Closure or diastema.
- Enamel hypoplasia.
- Fractured teeth.
- Approve extreme discoloration such a

- Tertacyclene staining
- Flourosis
- Devatilized teeth

- Ability to lengthen anterior teeths.

Contraindications:

- No enamel is present ,full crown should be considered.
- Central tooth to tooth habit bruring or other para functional habit such as pencil chewing.
- Certain type of occlusal problem such as class iii.

Q4. Suppose you have a crown that can be virtually indistinguishable from unrestored teeth and is most esthetically pleasing, identify the type of crown and write its advantages and disadvantages and indications.

Ans: Ceremic crown:

- It is the type òf anterior complete crown for vital teeth.
- They are made out of translucent material which give us a very attrective look to out teeths.

Advantages:

- They are suited for those people who has minimum space on their teeths.
- They are thinner material to other crowns.
- To stop plaque accumulation.

Disadvantage:

- Too much pressure might be break the crown.
- High cost.
- Short duration of time.

Indications:

- High esthetic demand.
- Indicated for anterior teeths that are destroy,fracture or discoloration etc.

Q2. In which conditions inlays and onlays are indicated and contraindicated?

Ans:

Indications :

Large Restorations:

- Better strength
- Control of contours
- Better alternative to a crown to a teeth that have been greatly weakened by caries or by a large failing restoration , but facial and lingual surfaces are relatively unaffected by disease.
- For such a weakened teeth ,the superior physical properties of the casting alloy are desirable to withstand occlusal loads placed on the restorations.
- An onlays can be designed to distribute occlusal loads over the tooth such a manner that decreases the chances of Fracture of the tooth in the future.
- Maintaining lingual and facial enamel/cementum is conductive to maintaining the health of contagious soft tissue.

Endodontically Treated Teeth:

- Molars and premolars with endodontic treatment can be restored with a cast metal onlay.

Teeth At Risk For Fracture:

- Teeth with extensive restoration , fracture line in enamel and dentin must be recognized as cleavage planes for future tooth fracture.
- Dental Rehabilitation With Cast Metal Alloys

- When cast metal restorations have already been used to restore adjacent or opposite teeth, the continued use of the same metal to avoid electrical and corrosive activity that may occur if the dissimilar metals are used.

Disthema Closures And Occlusal Plane Correction:

- Indicated when extension of mesiodistal dimension of tooth is necessary.
- Cast onlays may also be used to correct the occlusal plane of a slightly tilted Teeth.

Removable Prosthodontic Abutment:

- Teeth that are the serve as a abutments for a removable partial denture can be restored with a cast metal restorations.

Contraindications:

High Carries Rate:

- Facial and lingual tooth surface must be free of carries or previous restorations.
- If present , the tooth must be restored with a full crown.

Young Patients:

- Amalgam or composites are the restorative materials of choice for Class 1 and Class 2 restorations unless the tooth is severely broken down or endodontically restored.

Teeth At Risk For Fracture:

- Restorations unless the tooth is severely broken down or endodontically restored.

Esthetics:

- The use is restricted to the surfaces that are not visible at conversational distance.

Small Restorations:

- Amalgam and composites serve as a better option.