**Name: Shahab Ullah**

**ID # 13797**

**Paper: Operative Dentistry**

**Q1**.

Differentiate

* Three quarter crown
* Metal ceramic crown
* Seven eighth crown

**Ans**:

**Part A:**

The three quarter crown was introduced to the profession in 1901 by Carmichael.

Three-quarter crowns, are more accurately known as inlays or onlays. They fit like puzzle pieces into or onto a tooth without completely covering it as regular crowns do. An inlay is designed to fit snugly into a prepared part of the tooth on the groovy (valley-like) chewing surface. An onlays is crafted to perfectly match part of the tooth’s shape, which includes replacing at least one of the cusps (mountains) on the chewing surface.

* It is easier to seat than a full veneer crown,
* It is possible to check vitality subsequently,
* There is less destruction of tooth tissue,
* Aesthetics are more easily maintained.

**Difference**:

* They cover forth-fifth of the tooth surface buccal surface remain intact.
* They are retained by grooves on mesial, distal and occlusal surface.
* They are always made up of cast metal.

**Part B:**

**Metal ceramic crown:**

Metal ceramic crowns are a traditional type of crown often used in bridges plus crown and bridge cases. These restorations are made using either a gold or “white” (silver-colored) dental alloy. They’re known for their great strength and exceptional durability. They are often fitted onto back teeth and are considered a strong, robust type of crown. But they are viewed as less than attractive. Many people choose the all ceramic crowns, zirconium or the E-Max crown for their greater aesthetic appeal.

**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 design is especially effective either as a single tooth or an abutment restoration on maxillary molar teeth where both proximal surfaces are involved as well as the distal buccal surface of the tooth. In many instances, the mesiobuccal cusps of maxillary first and second molars can be preserved for esthetics and still provide ade-quate extension to include extensive areas of destruction.

**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.

**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.

**Q3**.

Define veneer, explain direct and indirect veneer technique?

**Ans**:

**Veneer:**

In dentistry, a veneer is a layer of material placed over a tooth. Veneers can improve the aesthetics of a smile and protect the tooth’s surface from damage. There are two main types of material used to fabricate a veneer: composite and dental porcelain. A composite veneer may be directly placed (built-up in the mouth), or indirectly fabricated by a dental technician in a dental lab, and later bonded to the tooth, typically using a resin cement.

**Direct Veneers:**

Composite resin veneers are applied using resin that is matched to the rest of your teeth. Additional layers of resin may be needed to correct the length and shape. The material will be shaped before being hardened with a laser or light. Once hardened, the composite material will be checked for bite and positioning before being polished to perfection.

**Direct veneers technique:**

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 composite resin.

**Indirect Veneers:**

Indirect or porcelain veneers require a more invasive treatment as some of the enamel on your teeth needs to be removed to make way for the thin sheets of dental porcelain. Once the enamel has been removed, a mold or impression will be made for your new custom porcelain veneers. If your teeth are too unsightly after enamel removal, I may recommend temporary veneers.

**Indirect veneer technique:**

Two appointments are required for this.

**Steps:**

**First appointment:**

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

**2nd appointment:**

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

**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**:

**Ceramic crown**:

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

**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.

**Q5**.

Briefly explain composite and porcelain veneer?

**Ans:**

**Composite Veneer:**

Composite veneers, also known as “composite bindings”, “componeers”, “same-day veneers” or “resin veneers”, is a less invasive cosmetic dental procedure that involves placing a layer of resin material directly onto a tooth. It is generally used to improve the shape, colour, size, and texture of the teeth to make them more attractive.

A composite veneer can be applied directly on the teeth as a fix and produce, beautiful, life-like results. The procedure is different from dental bridges, dental crowns, and dental fillings, all of which are more functional than aesthetic treatments. They are also different from porcelain veneers, in that they require little or no teeth reduction (drilling), and the procedure can be completed in a single visit.

The composite resin veneers can be installed on as many teeth as you choose. If you want a full smile makeover, the total cost can be as much as a fifth of the cost of regular porcelain veneers.

**Composite veneer made of:**

Dental composite resin is a specially designed material developed for use in dentistry. It’s primarily a paste, which is applied onto a tooth and then sculpted like putty. When the desired shape of tooth is achieved, it’s hardened using special light in a process referred to as light curing, and then polished. The new veneer surface ideally hides the old one that might be worn out, discoloured, damaged, or just non-aesthetic.

These composite materials are quite advanced, and are continually being improved for more translucent, life-like results. Composites are safe and effective, which explains why they are used in millions of dental cases worldwide to improve the aesthetics of a patient’s smile.

**Porcelain veneer:**

Porcelain is actually a very thin material which can be made to resemble the color of natural teeth. This is why it is heavily used in dentistry. Moreover, porcelain veneers are durable and can last for a long time if you take proper care of them .

A bad smile ruin can ruin your confidence and self-esteem. Porcelain veneers can help you re-build that confidence and show off those pearly whites.

There are several procedures that can help in this regard, and porcelain veneers seem to be one of the most popular ones. Porcelain veneers are a type of treatment that can correct a number of things including:

* Misaligned teeth
* Crooked teeth
* Yellow teeth
* Chipped teeth

**Steps of porcelain veneer:**

* Tooth trimming.
* Is a sedative required.
* Selection a shade for the veneer.
* Teeth impression.
* A temporary veneer is applied if necessary.
* Evaluating the fit.
* Bonding it on the tooth.