LOGBOOK

2nd Year BDS

Department of Science of Dental Materials

DEPARTMENT OF SCIENCE OF DENTAL MATERIALS

Name:.....

Name of the Institute:.....

Class No:..... Session:.....

Student's Contact No:.....

Email:.....

Student's Signature:.....

Paste your Picture

CERTIFICATE

It is certified that Mr./Miss. .....

Son / Daughter of .....

Class No: ..... has completed the practical work and Logbook during the

session .....

Head of Department

Practical Contents

First Module

- Wire bending exercises
- Manipulation of impression compound and impression taking
- Demonstration of zinc oxide/eugenol impression paste
- Manipulation of alginate impression material and impression taking
- Demonstration of addition silicone impression material

Second Module

- Manipulation of gypsum products for model/cast fabrication
- Making of C-Clasp for fabrication of partial denture
- Making of wax pattern on saddle area of cast for partial denture
- Perform articulation & teeth setup for partial denture
- Performing flasking, dewaxing and application of cold mold seal
- Manipulation of heat cure acrylic for partial denture
- Finishing and polishing partial denture

Third Module

- Manipulation of zinc phosphate cement
- Manipulation of polycarboxylate cement
- Manipulation of glass ionomer cement
- Manipulation of zinc oxide/eugenol cement
- Manipulation of calcium hydroxide cement (setting/non-setting)
- Manipulation of dental amalgam
- Manipulation of dental composites

Fourth Module

- Recognize various materials and equipment used during fabrication of porcelain fused to metal prosthesis.
- Observe the steps during fabrication of porcelain fused to metal prosthesis.

General Information

- Attendance is mandatory.
- Every student has to give a presentation on a given topic in class.
- Regarding lab procedures: Students should complete weekly tasks.
- Tutorials: Group discussions on given topics will be held on regular basis.
- Students should follow the code of conduct of the college.
- Students should come on time. Late comers will not be allowed to enter class or lab.
- Lab coats are mandatory during lab procedures.
- Lab coats should be neat and clean.
- Students should bring their own instruments.
- Eating and drinking is prohibited in the lab and lecture hall.
- Mobile phones should be switched off or at least on silent mode.
- Do not leave your belongings unattended.

Lab Protocols:
Students must have the following items before entering the lab for procedures:

- Lab coat
- Practical Logbook
- Instruments kit
- Working sheet (Any paper of 2x2 feet)

Course Objective

The objective of the course is to develop thorough understanding of properties of materials used in dentistry, their clinical applications and biochemical interaction with oral fluids and tissues.

Course Description

This course will be presented in two (2) parts:

Part I: - Theory (Lectures/Small group discussions/Large group formats/Tutorials)

Part II: - Practical: Following the lectures, general handling of dental materials covered in the lecture will be performed.

Recommended Books

- Applied Dental Materials by McCabe 14th Edition
- Phillips' Science of Dental Materials 13th Edition
- Craig's Restorative Dental Materials 13th Edition

Armamentarium

1. Examination instruments
2. Rubber bowl (Hard & Soft)
3. Mixing spatula (For Cements, Plaster & Alginate)
4. Glass slab
5. Pliers (Cutting, Round & Flat)
6. Wax knife
7. Plaster knife
8. Wax carver
9. Oil Painting Brush
10. Dental flask with press
11. Semi adjustable articulator/hinge articulator
12. Ceramic cup with lid
13. Impression trays: Dentate and Edentulous (Plastic/Metallic) ---- small, medium & large
14. Spirit lamp
15. Scale/ Ruler
16. Glass beaker

Grading Criteria

+A	**Outstanding**
A	**Excellent**
B	**Very Good**
C	**Fair**
D	**Poor**

List of Practicals Performed

S. No.	Title	Date	Signature
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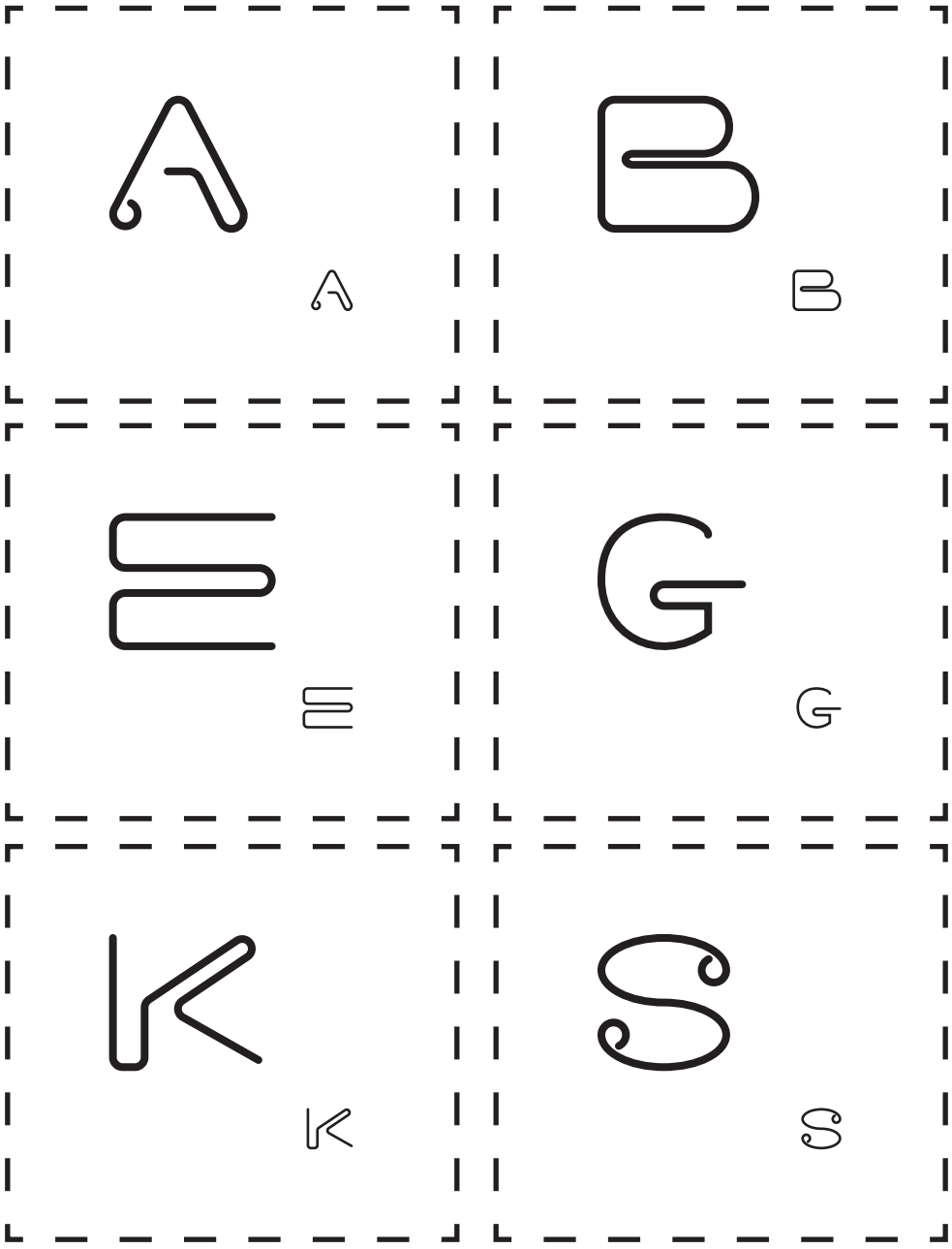
Wire Bending Exercise



Date	Alphabet	Grade	Sign
	A		
	B		
	E		
	G		
	S		
	K		

MANIPULATION OF IMPRESSION MATERIALS

Impression taking using Impression Compound

- Demonstration of Impression Compound
- Practical: Impression taking using edentulous models

Objective

At the end of practical, students should be able to:

1. Perform impression taking using impression compound.
2. Differentiate between the following characteristics:
   a. Dentate/Edentulous Impression trays
   b. Dentate/Edentulous Models

Availability:_____

Presentation:_____

Classification/Types:_____

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Applications/ Uses:_____

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Requirements/ Tools:_____

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Procedure:

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Facilitator's Signature

Demonstration on Manipulation of Zinc Oxide/Eugenol Impression Paste

➢ Demonstration of zinc oxide/eugenol impression paste

Objective

At the end of practical, students should be able to:

1. Perform Mixing/handling of zinc oxide eugenol impression paste.
2. Analyze the following characteristics:
    a. Homogenous mix
    b. Working time
    c. Setting time
    d. Properties

Availability:_____

Presentation:_____

Classification/Types:_____

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Applications/ Uses:_____

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Requirements/ Tools:_____

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Procedure:

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Facilitator's Signature

Impression taking using Alginate Impression Material

- Demonstration of Alginate Impression material
- Practical: Impression taking of fellow colleague's

Objective

At the end of practical, students should be able to:

1. Perform alginate mixing/handling.
2. Analyze the following characteristics of alginate impression material:
    a. Desirable consistency
    b. Working time
    c. Setting time
    d. Properties
3. Identify defects in recorded impression.

Availability:_____

Presentation:_____

Classification/Types:_____

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Applications/ Uses:_____

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Requirements/ Tools:_____

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Procedure:

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Facilitator's Signature

Demonstration on Manipulation of Silicone Impression Material

- Demonstration of silicone impression materials

Objective

At the end of practical, students should be able to:

1. Perform mixing/handling of silicon impression material.
2. Analyze the following characteristics of silicon impression material:
   a. Homogenous Mix
   b. Working time
   c. Setting time
   d. Properties

Availability:_____

Presentation:_____

Classification/Types:_____

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Applications/ Uses:_____

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Requirements/ Tools:_____

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Procedure:

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Facilitator's Signature

MANIPULATION OF DENTAL PLASTER

Fabrication of Model/Cast using Dental Plaster

- Demonstration of model/cast construction using mold/impression
- Practical: Fabrication of model/cast

Objective

At the end of practical, students should be able to:

1. Perform Model fabrication using mold/impression.
2. Analyze the following characteristics of soft/hard plaster:
    a. Pourable mix
    b. Working time
    c. Setting time
    d. Properties

Requirements/:_____

Tools:_____

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Procedure:

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Facilitator's Signature

MANIPULATION OF DENTAL CEMENTS

Zinc Phosphate Cement

- Demonstration of Mixing/Handling
- Practical

Objective

At the end of practical, students should be able to:

1. Perform $ZnPO_4$ cement Mixing/Handling with accuracy
2. Analyze the following characteristics of $ZnPO_4$ cement:
   a. Working consistency
   b. Working time
   c. Setting time
   d. Properties

Manipulation of Zinc Phosphate Cement

Availability:_____

Presentation:_____

Classification/Types:_____

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Applications/ Uses:_____

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Requirements/ Tools:_____

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Procedure:

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Facilitator's Signature

Polycarboxylate Cement

- Demonstration of Mixing/Handling
- Practical

Objective

At the end of practical, students should be able to:

1. Perform Cements Mixing/Handling with accuracy
2. Analyze the following characteristics Polycarboxylate cement:
   a. Working consistency
   b. Working time
   c. Setting time
   d. Properties

Manipulation of Polycarboxylate Cement

Availability:_____

Presentation:_____

Classification/Types:_____

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Applications/ Uses:_____

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Requirements/ Tools:_____

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Procedure:

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Facilitator's Signature

Glass Ionomer Cement

- Demonstration of the following characteristics of GIC
  - Proportioning & Mixing
  - Working/setting time & Properties
- Practical

Objective

At the end of practical, students should be able to:

1. Perform Glass ionomer cement Mixing/Handling
2. Analyze the following characteristics of GIC cement:
   a. Working consistency
   b. Working time
   c. Setting time
   d. Properties

Manipulation of Glass Ionomer Cement

Availability:_____

Presentation:_____

Classification/Types:_____

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Applications/ Uses:_____

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Requirements/ Tools:_____

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Procedure:

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Facilitator's Signature

Zinc Oxide/Eugenol Cement

- Demonstration of the following characteristics of ZnO/Eugenol Cement
  - Proportioning & Mixing
  - Working/setting time & Properties
- Practical

Objective

At the end of practical, students should be able to:

1. Perform Zinc Oxide/Eugenol cement Mixing/Handling
2. Analyze the following characteristics of ZnO/Eugenol cement:
   a. Working consistency
   b. Working time
   c. Setting time
   d. Properties

Manipulation of Zinc Oxide/Eugenol Cement

Availability:_____

Presentation:_____

Classification/Types:_____

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Applications/ Uses:_____

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Requirements/ Tools:_____

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Procedure:

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Facilitator's Signature

Calcium Hydroxide Cement

- Demonstration of the following characteristics of $Ca(OH)_2$ Cement
  - Proportioning & Mixing
  - Working/setting time & Properties
- Practical

Objective

At the end of practical, students should be able to:

1. Perform $Ca(OH)_2$ cement Mixing/Handling
2. Analyze the following characteristics of $Ca(OH)_2$ cement:
   a. Working consistency
   b. Working time
   c. Setting time
   d. Properties

Manipulation of Calcium Hydroxide Cement

Availability:_____

Presentation:_____

Classification/Types:_____

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Applications/ Uses:_____

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Requirements/ Tools:_____

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Procedure:

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Facilitator's Signature

Dental Amalgam

- Demonstration of the following steps in the manipulation of Dental Amalgam
  - Proportioning
  - Mixing/Trituration
    - Manual
    - Amalgam Mixer
- Practical

Objective

At the end of practical, students should be able to:

1. Perform steps involved in dental amalgam filling

Manipulation of Dental Amalgam

Availability:_____

Presentation:_____

Classification/Types:_____

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Applications/ Uses:_____

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Requirements/ Tools:_____

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Procedure:

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Facilitator's Signature

Dental Composite

- Demonstration of the following steps in the manipulation of Dental Composite
  - Presentation
  - Acid Etching/Bonding and Priming/Curing
  - Incremental Technique/Depth of cure
- Practical

Objective

At the end of practical, students should be able to:

1. Perform steps involved in dental composite filling

Manipulation of Dental Composite

Availability:_____

Presentation:_____

Classification/Types:_____

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Applications/ Uses:_____

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Requirements/ Tools:_____

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Procedure:

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Facilitator's Signature

Partial Denture

- Demonstration of fabrication steps for the acrylic Partial Dentures
- Practical: Partial Dentures construction

Objective

At the end of practical, students should be able to:

1. Perform individual steps involved in the Fabrication of Partial denture with accuracy
2. Analyze the following parts of Partial denture:
    - Saddle area
    - Connectors
    - Fitting and Non- Fitting surface
3. Identify the following characteristics of acrylic resin: (Heat and Self cure)
    - Setting time
    - Properties
    - Method of activation
4. Identify the components of acrylic partial denture

Partial Denture Fabrication

Date	Work done	Grade	Facilitator's sign	Grading Criteria
	Clasp making			A. Clasp rounded, not sharp, covered tooth cervically, visible (Not covered by acrylic) = Excellent B. Good C. Average
	Wax pattern			A. Wax pattern smooth, marked areas fully covered, not covering Clasps = Excellent B. Good C. Average
	Articulation & Teeth setup			A. Teeth aligned, not over-erupted and under-erupted, wax enveloped around cervical portion of tooth = Excellent B. Good C. Average
	Flasking			A. Flask cover full Plaster of Paris, Firm Pressure applied on student's flask = Excellent B. Good C. Average
	Dewaxing			A. Mould is smooth, Wax all removed = Excellent B. Good C. Average
	Separating media			A. Thin layer of cold mould seal on soft plaster mould and not teeth = Excellent B. Good C. Average

	Packing			A. Dough stage of heat cure Acrylic resin applied on mould, firm pressure with bench press and acrylic squeezed out, packing in student's flask = Excellent B. Good C. Average
	Curing			A. Student's flask with Acrylic dough 1st placed in normal H2O and then heated up to curing temperature = Excellent B. Good C. Average
	Deflasking			A. Flask placed at RTP and not in cold H_2O = Excellent B. Good C. Average
	Finishing & Polishing			A. Smooth, polished denture base and fitting surfaces = Excellent B. Good C. Average

List of Assignements/Presentations

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