



A

(Printed Pages 2)

(20222)

Roll No. ....

B.D.S.-II Prof.

**5140 (N)**

**B.D.S. Supply & Main Examination, Feb.-2022**

**DENTAL MATERIALS**

[ BDS-06(N) ]

*Time : Three Hours]*

*[Maximum Marks : 70*

**Note :** Attempt **all** questions. Use separate answer book **Part-A & Part-B.**

**Part-A**

1. What are dental ceramics? Discuss in detail composition, classification properties and uses of dental ceramics.

16×1=16

2. Explain in detail : 3×3=9

- (a) Phosphate bonded investments
- (b) Hygroscopic setting expansion
- (c) Injection moulding technique

**P.T.O.**

3. Write short notes on :  $5 \times 2 = 10$
- (a) Tissue conditioners
  - (b) Tarnish and corrosion

**Part-B**

4. Explain in detail :  $8 \times 2 = 16$
- (a) Dentin bonding agents
  - (b) Glass ionomer cement
5. Write briefly about the following :

$5 \times 2 = 10$

- (a) Inlay wax
- (b) Mercury toxicity

6. Write short notes on :  $3 \times 3 = 9$
- (a) Creep
  - (b) Glass transition temperature
  - (c) Sandwich technique

**5140 (N)/2**

D

(Printed Pages 3)

(20421)

Roll No. ....

**B.D.S.-II Prof.**

**5140(N)**

**B.D.S. Supply. & Main**

**Examination, April - 2021**

**Dental Material**

**(BDS-06)**

*Time : Three Hours ]*

*[Maximum Marks : 70*

**Note :** Attempt **all** the questions. Use separate Answer books for Part-A and B.

**Part - A**

1. Write in detail about following:  $2 \times 8 = 16$ 
  - (a) What are the investing/investment materials? Describe phosphate bonded investment material in detail.
  - (b) Discuss the biocompatibility of various dental Materials.

**P.T.O.**

2. Write briefly on the following:  $2 \times 5 = 10$
- (a) Various methods used to find out initial and final setting time of Gypsum products.
  - (b) Tarnish and corrosion.
3. Write short notes on:  $3 \times 3 = 9$
- (a) Poision's Ratio
  - (b) CAD-CAM technology
  - (c) Inlay casting wax.

**Part - B**

1. Write in detail about:  $2 \times 8 = 16$
- (a) Classify dental casting alloys. Discuss base metal alloys in detail.
  - (b) Classify direct filling gold. Describe the procedure of gold placement and condensation in detail.

**5140(N)/2**

2. Write briefly on the following:  $2 \times 5 = 10$

(a) Role of adhesion and bonding in Restorative dentistry.

(b) Metamerism and Fluorescence

3. Write short notes on-  $3 \times 3 = 9$

(a) Cavity liners and varnishes

(b) Pressable ceramics

(c) Luting cements

5140(N)/3

A  
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B.D.S.-II Prof.

**5140(N)**

**B.D.S. Supply. & Main Examination,  
November-2019**

**DENTAL MATERIALS**

**[BDS-06(N)]**

*Time : Three Hours]*

*[Maximum Marks : 70*

**Note :** Attempt *all* questions. Use separate answer books  
for **Part-A** and **Part-B**.

**Part-A**

1. Classify dental waxes. Describe in detail about inlay casting wax. 16×1=16
2. Explain in detail : 3×3=9
  - (a) Selection of amalgam alloy
  - (b) Boxing wax
  - (c) Proportional limit
3. Write short notes on : 5×2=10
  - (a) Setting expansion of dental investment
  - (b) Bench curing

**5140(N)**

**[P.T.O.]**

(2)

**Part-B**

- 4 Explain in detail :  $8 \times 2 = 16$
- (a) Compression moulding technique
  - (b) Direct filling gold
- 5 Write briefly about the following :  $5 \times 2 = 10$
- (a) Hue, value, chroma and its importance to esthetics
  - (b) Wax burn-out
- 6 Write short notes on  $3 \times 3 = 9$
- (a) Flux and anti-flux
  - (b) Beta-titanium
  - (c) Slurry

5140(N)



G  
(21218)  
B.D.S.-II Prof.

Printed Pages : 2  
Roll No. ....

**5140(N)**  
**B.D.S. Supply. & Main Examination,**  
**November-2018**  
**DENTAL MATERIALS**  
**[BDS-06(N)]**

*Time : Three Hours]*

*[Maximum Marks : 70*

*Note : Attempt all questions. Use separate answer book  
for Part-A and Part-B.*

**Part-A**

1. Discuss biohazards related to Dental Materials. How is toxicity evaluation and disinfection of dental material done? 10
2. Write in detail about waxes used in dentistry. 10
3. Write short notes on : 5×3=15
  - (a) Surface Tension
  - (b) Abrasives
  - (c) EDTA .

5140(N)

[P.T.O.]





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1. Classify gypsum products. Describe about impression plaster and dental investment. 10
2. Define dental cements and write about resin modified glass ionomer cement. 10
3. Write short notes on :  $5 \times 3 = 15$ 
  - (a) Slurry Water
  - (b) Cavity Liner
  - (c) Inlays and Onlays

5140(N)



G  
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B.D.S.-II Prof.

Printed Pages : 2  
Roll No. ....

**5140(N)**  
**B.D.S. Supply. & Main Examination,**  
**November-2018**  
**DENTAL MATERIALS**  
**[BDS-06(N)]**

*Time : Three Hours]*

*[Maximum Marks : 70*

*Note : Attempt all questions. Use separate answer book  
for Part-A and Part-B.*

**Part-A**

1. Discuss biohazards related to Dental Materials. How is toxicity evaluation and disinfection of dental material done? 10
2. Write in detail about waxes used in dentistry. 10
3. Write short notes on : 5×3=15
  - (a) Surface Tension
  - (b) Abrasives
  - (c) EDTA .

5140(N)

[P.T.O.]



(2)

Part-B

1. Classify gypsum products. Describe about impression plaster and dental investment. 10
2. Define dental cements and write about resin modified glass ionomer cement. 10
3. Write short notes on :  $5 \times 3 = 15$ 
  - (a) Slurry Water
  - (b) Cavity Liner
  - (c) Inlays and Onlays

5140(N)



N (Printed Pages 2)

(201117) Roll No. ....

B.D.S.- II Prof.

5140(N)

B.D.S. Supply. & Main

Examination, Nov. 2017

Dental Material

[BDS-06(N)]

Time : Three Hours ] [Maximum Marks : 70

Note : Attempt all the questions. Use separate answer book for Part-A and Part-B.

Part - A

1. Classify Dental Cements. Discuss in detail composition, theories of bonding to tooth structure and properties of Glass Ionomer Cements. 16
2. Explain in detail the following: 3 x 3 = 9
  - (a) Setting Expansion in Gypsum.
  - (b) Addition Silicone Impression material.

P.T.O.

(c) Metal-Ceramic Restoration.

3. Write short notes on : 5 x 2 = 10

- (a) Denture base curing cycles.
- (b) Alginate Impression material

Part - B

1. Give detailed discussion on the following: 8 x 2 = 16

- (a) Casting Defects
- (b) Abrasive and Polishing agents.

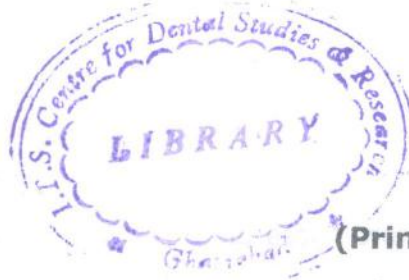
2. Write briefly about the following: 5 x 2 = 10

- (a) Impression Compound
- (b) Base metal alloys in Crown and Bridge

3. Write short notes on: 3 x 3 = 9

- (a) Cermet
- (b) Cavity liners and varnishes
- (c) High Copper Silver alloys

5140(N)/2



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(Printed Pages 2)

(20216)

Roll No. ....

**B.D.S. II Prof.**

**5140(N)**

**B.D.S. Supply Examination, Feb. 2016**

**Dental Material**

**(BDS-06)**

*Time : Three Hours ] [Maximum Marks : 70*

**Note :** Attempt **all** questions. Use separate Ans.

Books for Part-A & Part B.

**Part-A**

1. Discuss in detail about irreversible hydrocolloid-impression material. 16
2. Write briefly on following : 2×5=10
  - (a) Zinc oxide eugenol impression paste
  - (b) Dental Plaster

**P.T.O.**

3. Write short notes on : 3×3=9
- (a) Modifiers
  - (b) Galvanism
  - (c) Microleakage

**Part-B**

1. Discuss in detail about Dental Amalgam.16
2. Write briefly on following : 2×5=10
- (a) Casting defects
  - (b) Varnishes
3. Write short notes on : 3×3=9
- (a) Soldering
  - (b) Yield Strength
  - (c) Ductility

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Roll No. ....

B. D. S. II Prof.

**5140(N)**

**B. D. S. Supply. & Main Examination, Oct. 2015**

**Dental Material**

**[BDS-06(N)]**

*Time : Three Hours]*

*[Maximum Marks : 70*

*Note :* Attempt all the questions. Use separate answer book for Part-A and Part-B.

**Part-A**

[Marks : 35

1. What are dental casting investment materials ? Explain in brief their definition, requirements and classification. 16
  
  2. Explain in detail the following procedures and materials use in them : 3×3=9
    - (a) Soldering
    - (b) Brazing
    - (c) Welding.
-

( 2 )

3. Write short notes on : 5×2=10  
(a) Gypsum products  
(b) Impression materials.

**Part-B** [Marks : 35]

1. Give detail explanation of the following : 8×2=16  
(a) Direct filling gold  
(b) Dental casting allays.
2. Write briefly the following : 5×2=10  
(a) Denture base resins  
(b) Dental porcelain.
3. Write short notes on : 3×3=9  
(a) Dental stone  
(b) Abrasives  
(c) Hydrocolloids.

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(Printed Pages 3)

(20315)

Roll No. ....

B.D.S. II Prof.

**5140(N)**

**B.D.S. Supply & Main Examination,**

**March 2015**

**Dental Material**

**BDS-06(N)**

*Time : Three Hours ]*

*[Maximum Marks :70*

**Note:** Attempt **all** the questions. Use separate  
Answer books for Part - A and B.

**Part - A**

1. Write in detail about : 2×8=16
  - (a) Classification and Composition of dental amalgam allays.
  - (b) Difference between high copper and low copper allays.

P.T.O.

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2. Write briefly on following :  $2 \times 5 = 10$
- (a) Different curing cycles for acrylic resins.
  - (b) Different forms of direct filling gold.
3. Write short notes on :  $3 \times 3 = 9$
- (a) Stress and strain.
  - (b) Dentifrices
  - (c) Coupling agents.

**Part - B**

1. Write in detail about :  $2 \times 8 = 16$
- (a) Different types of investment materials.
  - (b) How can Casting shrinkage be compensated?
2. Write briefly on the following :  $2 \times 5 = 10$
- (a) Different generations of Dentine bonding agents.
  - (b) Classification and uses of Glass ionomer cement.

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3. Write in short about :  $3 \times 3 = 9$

- (a) Toxicity associated with dental materials.
- (b) Metal ceramic bond.
- (c) Osseointegration.

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**Roll No. ....**

**B.D.S. II Prof.**

**5140(N)**

**B.D.S. Supply & Main Examination,**

**Oct. 2014**

**Dental Material**

**(BDS-06)**

*Time: Three Hours ]*

*[ Maximum Marks : 70*

**Note :** Attempt **all** questions. Use separate answer books for Part A and B.

**PART - A**

1. Write in detail about following :  $2 \times 8 = 16$ 
  - (a) Classify Gypsum Products. Describe dental stone in detail.
  - (b) Define Dental Ceramics. Discuss their processing techniques in detail.

**P.T.O.**

2. Write briefly on the following :  $2 \times 5 = 10$

(a) Finishing and polishing of Acrylic dentures.

(b) Hardness and Hardness numbers.

3. Write short notes on :  $3 \times 3 = 9$

(a) Annealing of Gold.

(b) Dimensions of color.

(c) Anticariogenic Cements.

#### **PART - B**

1. Write in detail about :  $2 \times 8 = 16$

(a) Classify Dental Cements. Discuss zinc-oxide Eugenol Cement in detail.

(b) Classify casting defects. Discuss the causes of porosities in detail.

5140(N)\700\2

2. Write briefly on the following :  $2 \times 5 = 10$

(a) Softening and Hardening heat treatment of casting alloys.

(b) Different methods of Strengthening Dental Ceramics.

3. Write short notes on :  $3 \times 3 = 9$

(a) Ductility and Malleability

(b) Soldering and Brazing.

(c) Prevention of Microleakage.

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(Printed Pages 3)

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Roll No. ....

B.D.S. II Prof.

**5140(N)**

**B.D.S. Supply & Main Examination,**

**Feb. 2014**

**Dental Material**

(BDS-06)

*Time : Three Hours ]*

*[Maximum Marks : 70*

**Note :** Attempt **all** the questions. Use separate  
Answer books for Part-A and B.

**Part-A**

1. Write in detail about following :  $2 \times 8 = 16$
- (a) Classify dental waxes and describe their  
ideal requirements.
- (b) Composition, properties and uses of  
INLAY CASTING WAX.

P.T.O.

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2. Write briefly on the following :  $2 \times 5 = 10$

- (a) Casting Defects
- (b) Denture base resins

3. Write short notes on :  $3 \times 3 = 9$

- (a) Creep and flow
- (b) Delayed Expansion
- (c) Sandwich Technique

**Part-B**

1. Write in detail about :  $2 \times 8 = 16$

- (a) Classification of Gypsum products and their properties.
- (b) Factors affecting the setting time of dental stone.

2. Write briefly on the following :  $2 \times 5 = 10$

- (a) Composition and properties of Dental porcelain.
- (b) Eutectic and Peritectic alloys

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3. Write short notes on :  $3 \times 3 = 9$

- (a) Finishing and polishing agents
- (b) Phosphate bonded investment material
- (c) Setting reactions involved in alginate setting.

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(20913)

Roll No. ....

B.D.S. II Prof.

**5140(N)**

**B.D.S. (Main & Supply.) Examination, Sept. 2013**

**DENTAL MATERIAL**

**(BDS-06)**

*Time : Three Hours*      *[Maximum Marks : 70*

*Note : Attempt all questions. Use separate copy for Part-A and Part-B.*

**Part-A**

**[Marks : 35**

1. Write in detail about the following :      8×2
  - (a) Factors controlling the setting time of gypsum products.
  - (b) Methods of measuring initial and final setting time of Plaster of Paris.
2. Write briefly on the following :      5×2
  - (a) Composition and properties of impression compound.
  - (b) Polymerization shrinkage of acrylic resins.

( 2 )

3. Write short notes on the following :  $3 \times 3$
- (a) Hardness
  - (b) Pumice powder
  - (c) Soldering.

**Part-B**

[Marks : 35

1. Write in detail about the following :  $8 \times 3$
- (a) Importance of silica in investment materials
  - (b) Composition and manipulation of Zince phosphate cement.
2. Write briefly on the following :  $5 \times 2$
- (a) Tissue conditioners
  - (b) Advantages and disadvantages of porcelain teeth.
3. Write short notes on the following :  $3 \times 3$
- (a) Microleakage
  - (b) Inlay wax
  - (c) Separating media.

5140(N)-2-460

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Roll No. ....

B.D.S.-II Prof.

**5140(N)**

**B. D. S. Examination, August 2012**

**DENTAL MATERIAL**

**(BDS-06)**

**(New)**

*Time : Three Hours]*

*[Maximum Marks : 70*

*Note : Attempt all the questions. Use separate Answer Books for Part-A and Part B.*

*Part-A*

1. Classify dental waxes. Discuss in detail about blue intecy wax. 16
2. Write briefly on the following : 2×5=10
  - (a) Pickling and percolation
  - (b) Denten bonding agents.
3. Write short notes on the following : 3×3
  - (a) Dental casting alloys
  - (b) Flow.

(2)

*Part-B*

1. Classify dental casting investments materials. Discuss in detail the gypsum bonded investment material. 16
  
2. Write briefly on the following : 5×2=10
  - (a) Direct filling gold
  - (b) Amalgamation.
  
3. Write short notes on the following : 3×3=9
  - (a) Dental ceramics
  - (b) Sprue
  - (c) Glass ionomer cement.

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DEPARTMENT OF DENTISTRY  
47, Knowledge Park-III, Greater Noida

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(20711) Roll No. ....

B.D.S. II Prof.

**5140(N)**

**B.D.S. Supply Examination, July 2011**

**Dental Material**

**(BDS - 06)**

**(New)**

*Time : Three Hours ] [ Maximum Marks : 70*

**Note :** Attempt all the questions. Use separate Ans. Books for Part-A and B.

**Part - A**

1. Write in detail about the following :  $2 \times 8 = 16$

- (a) Classify Gypsum Products. How can anyone ACCELERATE/RETARD the setting reaction of a Gypsum Products.

P.T.O.

6

(b) Describe briefly composition, properties and uses of Pattern Wax.

2. Write briefly on following :  $2 \times 5 = 10$

(a) Synersis & Imbibation

(b) Tarnish and Corrosion

3. Write short notes on :  $3 \times 3 = 9$

(a) Plasticizers

(b) Annealing

(c) Creep

### Part - B

1. Write in detail about the following :  $2 \times 8 = 16$

(a) Classify Denture Base Materials, describe stages and Reaction of Polymerization of Heat Cure Denture Base Resins.

(b) Write in detail about various form of Direct Filling Gold.

5140(N)\440\2

7

2. Write Briefly on the following :  $2 \times 5 = 10$

(a) Ductility and Malleability

(b) Give the classification, composition and properties of Glassionomer Cement.

3. Write short notes on :  $3 \times 3 = 9$

(a) Ring Liner

(b) Acid Etching

(c) Bioglass +

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Roll No. ....

**B.D.S. II Prof.**

**5140 (N)**

**B.D.S. Examination, Dec. 2011**

**Dental Material**

**BDS - 06 (N)**

*Time: Three Hours ] [ Maximum Marks : 70*

**Note :** Attempt all the questions. Use separate Answer Books for Part-A and B.

**Part - A**

1. Write in detail about following :  $2 \times 8 = 16$

(A) What are Gypsum Products? Give types, properties and effects of water powder ratio on setting.

(B) Give the composition and setting reaction of Zinc

**P.T.O.**

② ①

Give the composition, setting  
of  
ZnOxide Eugenol impression paste.

2. Write briefly on the following :  $2 \times 5 = 10$

(a) Classify the denture base materials. What are the stages of polymerization of heat cure resin.

(b) Acid Etching for Composit Resin.

3. Write short notes on :  $3 \times 3 = 9$

(i) Bioglass ✓

(ii) Creep

(iii) Plasticizers ✓

#### Part - B

1. Write in detail about the following :  $2 \times 8 = 16$

(A) Define the term "Investment Materials" explain their ideal requirement.

(B) What are Flux and Antiflux.

2. Write briefly on the following :  $2 \times 5 = 10$

(A) Describe the different type of waxes used in dentistry.

(B) Direct Filling Gold.

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3. Write short notes on :

3×3=9

- (i) Tarnish & Corrosion
- (ii) Annealing
- (iii) Lowfusing Porcelain.

5140 (N)\960\3

9

P (Printed Pages 3)

(21110) Roll No. ....

B.D.S. II Prof.

**5140 (N)**

**B.D.S. Examination, Nov. 2010**

**Dental Material**

**Paper - III**

**BDS - 06 (N)**

*Time : Three Hours ] [ Maximum Marks : 70*

**Note :** Attempt all the questions. Use separate Ans.  
Books for Part-A and B.

**Part - 'A'**

1. Write in detail about the following : 2×8=16
  - (a) Describe the Ideal requirements of an impression material, classify these materials on the basis of their properties.

**P.T.O.**

15

(b) How can anyone control the setting time of Alfa-Hemihydrate.

2. Write briefly on the following :  $2 \times 5 = 10$

(a) Classify the casting defects explain their causes and suggests remedies.

(b) Soldering and Welding

3. Write short notes on :  $3 \times 3 = 9$

(a) Pickling

(b) Micro Leakage

(c) Carborandum

### Part 'B'

1. Write in detail about the following :  $2 \times 8 = 16$

(a) Describe composition, amalgamation reaction and advantages of high Copper Silver Alloys.

(b) INLAY CASTING WAX.

5140(N)\700\2

2. Write briefly on the following : 2×5=10

- (a) Give the composition, properties and manipulation of GLASS IONOMER CEMENTS.
- (b) Give the requirements of metal and ceramics used in metal ceramic restoration.

3. Write short notes on : 3×3=9

- (a) CAVITY VARNISH
- (b) SEPRATING MEDIA
- (c) HARDNESS

52

17

Roll No. ....

(2094)

B.D.S. Ist Professional

5138

B. D. S. Examination, Sept. 2004 ✓

Paper III

Dental Materials

(BDS-03)

Time : Three Hours] [Maximum Marks : 50

Note : Attempt all questions.

(F)

Part A

1. ✓ Enumerate the tooth coloured restorative materials. Write classification, composition, condensation and uses of porcelain. 8
2. ✓ Classify gold alloys. Give their composition and uses in detail. 8

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3. Write short notes on the following : 3 each
- (i) Die materials
  - (ii) Crazeing in resins
  - (iii) Polishing and finishing materials.

*Part B*

4. Classify dental cements. Give composition, manipulation and uses of Polycarboxylate Cement.

5. Describe briefly the following : 4 each
- (i) Investment materials
  - (ii) Denture base materials.

6. Compare and contrast the following : 3 each
- (i) Strength and hardness
  - (ii) Stress and strain
  - (iii) Malleability and ductibility.



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(2044)

Roll No. ....

155

**B.D.S. Ist Professional**

**5138**

**B.D.S. Examination, April-2004**

**Paper - III**

**DENTAL MATERIALS**

**(BDS-03)**

*Time : Three Hours ]*

*[ Maximum Marks : 50*

Note : Attempt *all* questions.

**Part - A**

1. Classify Gypsum products used in dentistry. 2  
Discuss the following in detail :
  - (a) Setting reaction 2
  - (b) Setting time 2
  - (c) Setting expansions. 2
  
2. Compare and contrast :
  - (a) Ductility and malleability 2
  - (b) Elastic and proportional limit 2

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P.T.O.

16

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- (c) Tarnish and corrosion 2
- (d) Syneresis and Imbibition. 2

3. Write short notes on :

- (a)  Duplicating materials 3
- (b)  Tissue conditioners 3
- (c)  Curing porosity. 3

**Part - B**

4. Enumerate the steps in Gold inlay casting procedure. How will you prevent the suspected defects in casting? 8

5. Classify Dental Cements. Discuss the composition, manipulation and uses of the following : 2

- (a) Calcium Hydroxide Cements. 2
- (b) Zinc Phosphate Cements. 2
- (c) Glass Ionomer Cements. 2

6. Write short notes on :

- (a) Gold Foil.  3
- (b) Porcelain 3
- (c) Abrasives. 3

(19)  
Roll No. ....

(2043)

BDS I Year

5138

B. D. S. Examination, April 2003

Dental Materials

(BDS-03)

*Time : Three Hours] [Maximum Marks : 50*

*Note : Attempt all questions.*

*Part A*

1. Classify dental cements. Describe the composition, properties and uses of glass ionomer cement. 9
2. Describe dental amalgam with reference to its status in Dentistry as restorative material. 8
3. Write short notes on the following : 9
  - (a) Annealing
  - (b) Titanium
  - (c) Sprue former.

20

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*Part B*

4. Classify dental casting alloys. Describe the composition and properties of metal ceramic alloy. 7
5. Classify elastomeric impression materials. Enumerate the composition, properties and technique of manipulation of polysulfide impression material. 8
6. Write short notes on the following : 9
  - (a) Die material
  - (b) Pickling
  - (c) Cavity varnish or liners.