

**MANIPAL ACADEMY OF HIGHER EDUCATION**  
(Deemed University)

**FIRST BDS DEGREE EXAMINATION – MAY 2006**

**SUBJECT: DENTAL MATERIALS (ESSAY)**

Saturday, May 27, 2006

Time: 14:20 – 17:00 Hours

Maximum Marks: 80

**✍ Draw diagrams and flow charts wherever appropriate.**

1. Classify denture base materials. Enumerate the ideal requirements of denture base materials.  
Write about porosities in acrylic resin denture bases.

(1+5+4 = 10 marks)

2. Write Short notes on:

- 2A. Wetting and contact angle
- 2B. Ductility and Malleability
- 2C. Manipulation of agar – agar
- 2D. Addition polysilicone impression material
- 2E. Setting times measurement in gypsum products
- 2F. Any five abrasive agents

(5×6 = 30 marks)

3. Classify dental ceramics. Describe the condensation and firing steps involved in the fabrication of porcelain jacket crown.

(3+3½+3½ = 10 marks)

4. Write short notes on:

- 4A. Small particle filled composite resins
- 4B. Composition, properties and uses of Zinc polycarboxylate cement
- 4C. Unmodified zinc oxide eugenol cement
- 4D. Phosphate bonded investment material
- 4E. Mat gold
- 4F. Sprue former

(5×6 = 30 marks)



**MANIPAL ACADEMY OF HIGHER EDUCATION**

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**FIRST BDS DEGREE EXAMINATION – JULY 2006****SUBJECT: DENTAL MATERIALS (ESSAY)**

Saturday, July 22, 2006

Time: 14:20 – 17:00 Hours

Maximum Marks: 80

**✍ Draw diagrams and flow charts wherever appropriate.**

1. Give the composition, manipulation, setting reaction, merits and demerits of Zinc oxide eugenol impression paste.

(3+2+1+2+2 = 10 marks)

2. Write short notes on:

2A. Modulus of elasticity.

2B. Viscoelastic property.

2C. Composition of dentifrice.

2D. Fluxes and antfluxes used in soldering.

2E. Slow and fast curing methods in heat cure acrylic denture base resins.

2F. Resilient liners.

(5×6 = 30 marks)

3. Classify silver amalgam alloy powder. How lathe cut and spherical alloy powders are manufactured? Add a note on delayed expansion.

(3+4+1+2 = 10 marks)

4. Write short notes on:

4A. EBA – alumina reinforced Zinc oxide eugenol cement.

4B. Cavity varnish.

4C. Types of bonding in Metal – ceramics.

4D. 18 / 8 Stainless steel wire.

4E. Solid solutions.

4F. Localized shrinkage porosity.

(5×6 = 30 marks)

