

MANIPAL UNIVERSITY
FIRST BDS DEGREE EXAMINATION – MAY 2007

SUBJECT: DENTAL MATERIALS (ESSAY)

Wednesday, May 30, 2007

Time: 14:20 – 17:00 Hours

Maximum Marks: 80

✍ Draw diagrams and flow charts wherever appropriate.

1. Classify Elastomers. Explain the measurement of working time and setting time in elastomers. Add a note on reline impression technique.

(2+5+3 = 10 marks)

2. Write short notes on:

- 2A. Thermal conductivity
- 2B. Techniques of soldering
- 2C. Die stones
- 2D. Calcium hydroxide base.
- 2E. Creep in amalgam.
- 2F. Glazing of ceramic restorations.
- 2G. Heat treatment of gold alloys.
- 2H. Processing waxes.
- 2I. Comparison of chemical and light cured composites.
- 2J. Separating medium.

(5×10 = 50 marks)

3. Write short answers to the following:

- 3A. Define abrasion. Write two factors affecting abrasion.
- 3B. What is clearance angle? Give its significance.
- 3C. Mention two dental examples of heterogeneous corrosion.
- 3D. Merits and demerits of Ti implant.
- 3E. Physical changes observed during mixing of denture base resins.
- 3F. What is homogenization? Give one dental example of homogenization.
- 3G. Classify porosity in dental casting alloys.
- 3H. What is meant by cast metal and wrought metal?
- 3I. What is meant by stabilized steel?
- 3J. Super elasticity of Ni-Ti wire.

(2×10 = 20 marks)



MANIPAL UNIVERSITY**FIRST BDS DEGREE EXAMINATION – SEPTEMBER 2007****SUBJECT: DENTAL MATERIALS (ESSAY)**

Monday, September 24, 2007

Time: 14:20 – 17:00 Hours

Maximum Marks: 80

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

1. Classify Silver amalgam alloy powder. Describe the composition and amalgamation reaction of low copper and high copper amalgam.

(3+3+4 = 10 marks)

2. Write short notes on:

- 2A. Fatigue strength.
2B. Fillers in composite resins.
2C. Copolymers.
2D. Chemical tempering and thermal tempering of ceramics.
2E. Composition of zinc oxide eugenol impression material.
2F. Tooth bonding and biological effects of glass ionomer cement.
2G. Corrosion due to heterogeneous composition.
2H. Factors affecting rate of cutting in dental burs.
2I. Wax elimination and heating of investment mould.
2J. Comparison between heat cure and self cure acrylic resins.

(5×10 = 50 marks)

3. Write brief answers:

- 3A. Cast joining/welding.
3B. Fluorescence.
3C. Pin hole porosity in casting.
3D. Merits and demerits of alginate impression material.
3E. Dental examples of annealing.
3F. Advantages and disadvantages of phosphate bonded investment.
3G. Techniques of pattern preparation.
3H. Define addition polymerization and condensation polymerization.
3I. Uses of 18/8 Stainless steel.
3J. Functions of cavity bases.

(2×10 = 20 marks)

