

FEDERAL UNIVERSITY OF TECHNOLOGY, OWERRI
SCHOOL OF HEALTH TECHNOLOGY
DEPARTMENT OF DENTAL TECHNOLOGY
RAIN SEMESTER (2014/2015) EXAMINATIONS

COURSE: DNT 308 – MATERIALS PROCESSING FOR DENTAL TECHNOLOGY

TIME ALLOWED: 2 HOURS

DATE: AUGUST, 2015

INSTRUCTIONS: ANSWER ALL QUESTIONS

1. a) What do you understand by the terms: biomaterials, biocompatibility and biomechanics in relation to dental Implants.

b) Outline four common interactions in restorative dentistry.

Outline three factors that determine the performance of dental restorations.

2. What are dental amalgams? Explain (i) their classification. (ii) Their limitation as implants.

(iii) Need for higher copper (Cu) content in conventional amalgams. (v) Trituration.

3. Outline your understanding of the composition and properties of a typical dental porcelain.

Briefly outline the processes in the production of a porcelain jacket crown.

State the advantages and disadvantages over other dentures.

4. a) What do you understand by the term composite materials.

Highlight areas in dentistry where composites are applied and why?

State only the law of mixtures in a two phase composite as it applies to tensile strength and

Young's modulus.

b) List the advantages and disadvantages of particulate fillers.

Discuss the production and application of plasticizers in restoration dentistry.