

FEDERAL UNIVERSITY OF TECHNOLOGY, OWERRI  
SCHOOL OF HEALTH TECHNOLOGY  
DEPARTMENT OF DENTAL TECHNOLOGY

HARMATTAN SEMESTER 2016/2017 SESSION EXAMINATIONS

**DNT 407 Metallic Prosthodontics I (2 units) Time allowed: 2 ½ hrs Date:19/06/2017**

**INSTRUCTION: ATTEMPT ALL QUESTIONS IN SECTION A**

1. A colloid is .... Mention the materials it is associated with in dental technology.
2. What makes the difference between thermal and mechanical dimensional change?
3. Give four purposes of heat treating a cast alloy.
4. Mention three means of compensating for alloy shrinkage during metal casting.
5. Why do we incorporate asbestos liner during metal casting?
6. With examples Differentiate between precious, and non precious metals.
7. Mention four ways through which a Dental Technologist can compensate for alloy shrinkage in the laboratory.
8. What is forming and shaping as applied to metal casting?
9. Define metal casting.
10. Why is the knowledge of tooth carving relevant in metallic prosthodontics?
11. What do you understand by "inversion change" in metal casting process? Give the significance.
12. Mention four application areas of metallic prosthodontics.
13. Chemical dimensional change is.....
14. The acronym PFM stands for.....
15. What is dimensional change? Mention three sources.
16. Why is cobalt chromium alloy difficult to finish after casting?
17. How is malleability different from ductility?
18. What is hardness?
19. What is a noble metal?
20. How will you prepare a solution from a solute not soluble in a given solvent?

**SECTION B (Attempt any two questions)**

1. In his presentation, Eyarefe S.O (2010) stressed that Metallic Prosthodontics is another in the series of various areas of study that enhances the proficiency of a Dental Technologist. Substantiate this assertion.
2. Before a dental technologist can undergo the physical manipulation of metallic elements in the fabrication of appliances, S/he must have an in-depth knowledge of the physical, chemical and biological properties of metallic materials for efficiency and effectiveness in practice. Buttress this view.
3. Heat treatment is one of the essential components of metal casting process in the Dental laboratory. Explain vividly the heat treatment of type IV high gold alloy.