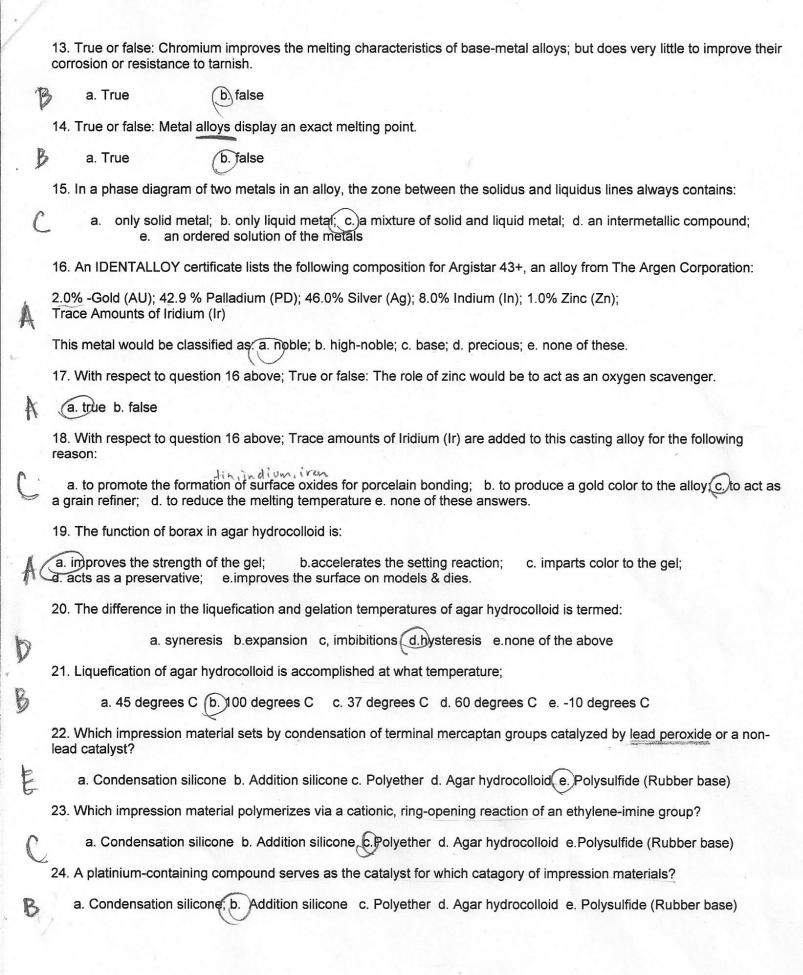
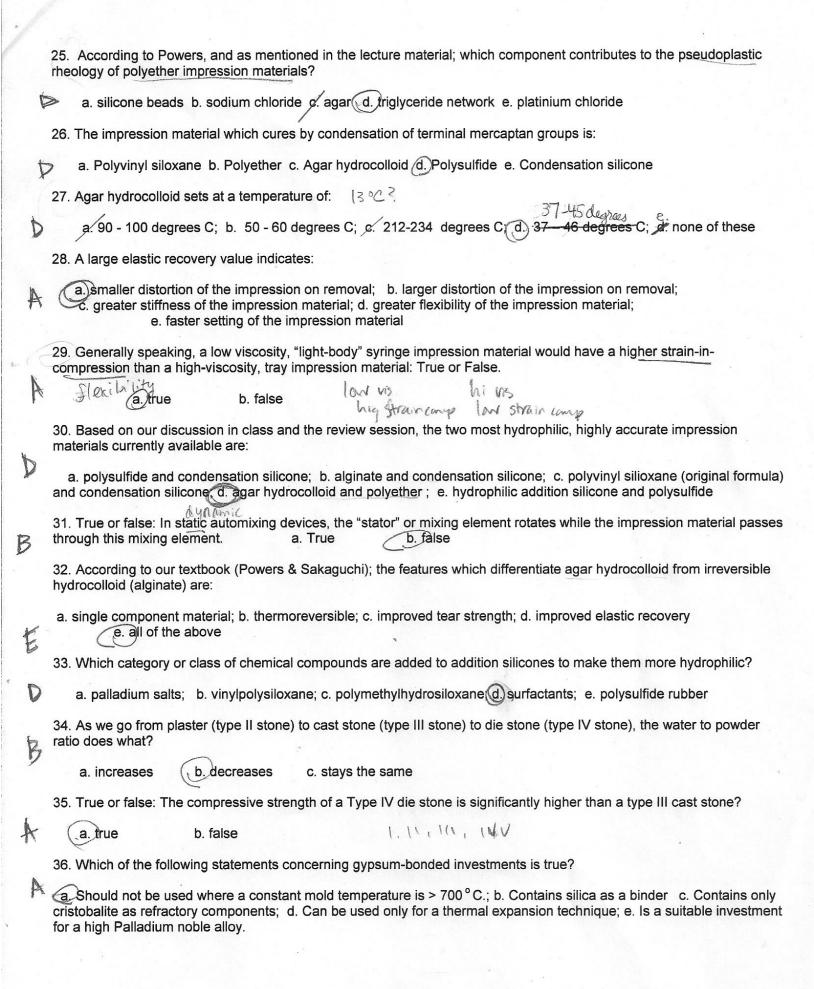
CORRECTED

Dental Materials II; Mid-Term Examination; February 21, 2011: Version 2.2

1. Which element is added to a flux when used with chromium-containing alloys to dissolve chromium oxides?

A	a. potassium huoride b. chiorine c. potassium borate d. sodium chioride e.calcium tetraborate
1	2. Based on its melting temperature, a 75% gold, Type III gold alloy can be melted adequately with a:
B	a. air-acetylene torch; b. air-gas torch; c. oxygen-acetylene torch; d. oxygen-gas torch; e. none of these answers
	3. The fusion temperature of the solder should be at least ° C. below that of the parts being joined.
E	a. 5-10 b. 15-25 c. 26-36 d. 37-48 e. 56-100
	4. Which quality refers to the property of a solder to spread and flow well over the surfaces of the parts being joined?
D	a. easy flowing b. broadly flowing c. rapid flowing d. free flowing e. easy spreading
	5. The temperature of an alloy determines the burnout temperature, type of investment, and type of heat source to be used during the casting process.
3	a. solidus (b.)iquidus c. 40% of liquidus d. 80 % of solidus e. none of the above
	6. Rapid removal of an elastomeric impression results in larger distortion of the impression on removal.
>	a. True b. False
	7. In comparison to a gold-based alloy, palladium-based alloys:
	a. have an increased tendency to tarnish b. have increased solidus and liquidus temperature; c. can be used easily with gypsum-based investments; d. have reduced hardness; e. none of the above
	8. By definition, high-noble alloys:
	a. contain a minimum of 50 wt% ting b must have a noble metal content of at least 60 wt%, of which at least 40 wt% is gold; c. must have a noble metal content of at least 60 wt%, of which at least 35 wt% is platinum; d. consist of 10 wt% gold, 10 wt% silver, and 80 wt% copper; e. none of the above
	9. By definition, base-metal alloys contain less than wt% noble metals.
T	a. 10 b. 15 c. 25 d. 30 e. none of the above
	a. 10 b. 15 c. 25 d. 30 e. none of the above 10. Which of the following element(s) is/are classified as noble? And the following element(s) is/are classified as noble?
	a. Gold, palladium, and platinum; b. Silver c. Iridium d. (a), (b), & (c) e. (a) and (c)
	11. Which element(s) generally serves/serve as hardening element(s) in alloys with high gold content?
	a. Copper; b. Silver; c. Palladium; d. Platinum; e.(a), (b), (c), & (d)
	12. The function of a flux is:
A	 a. to eliminate oxides and prevent their formation in the molten metal; b. to polish the metal surface; c. to significantly reduce the melting temperature; d. to induce the formation of an ordered solution within the metal; e. none of the above.





	37. Phosphate-bonded investments have high "green" strength, which means:
-	a. The investment changes color to a green tint at a critical strength; b. The investment has a high strength at the precise end of working time of the pre-fired strength of the investment acquired by chemical reaction at room temperature; d. The strength of the investment after the wax burn-out process; e. None of the these.
3	38. Thermal expansion of investment materials, involving the silica polymorph refractory component, is due to the mechanism of:
	a. Displacive changes in crystal structure with bond breakage b Displacive changes in the crystal structure without bond breakage; c. Expansion of the calcium sulfate component; d. none of the these answers; e. a & c
4	39. Investments used in the thermal (thermal expansion technique) usually contain the silica refractory material, which has a high thermal expansion.
_	a. quartz b. tridymite c. crystobalite d. calcium sulfate e. borax
	40. In phosphate-bonded investments, which material reacts with phosphate ions at room temperature to cause the setting of the investment?
0	a. potassium oxide b. aluminium chloride c. sodium fluoride d magnesium oxide e. potassium citrate
	41. Special liquid, which is used with Phosphate-Bonded invetments, consists of:
E	a. methyl chloride b. lead acetate c.sodium fluoride d.borax e.silica sol in water
	42. Special liquid, when mixed with a phosphate bonded investment (PBI) instead of just water, alters which of the following properties:
D	a increases strength; b. permits the PBI to expand hygroscopically; c. increases the setting expansion of the PBI; d. all of the above; e. none of the above.