

 <p>جامعة طنطا كلية الصيدلة</p>	Tanta University Faculty Of Pharmacy Department Of Pharmaceutical Technology		
	Examination For Cosmetics Diploma Students		
	Course Title: Advanced Pharmaceutical Formulations I		Code: TU10-6146^b
Date: 15 /3 /2021	Term : First	Total Marks: 60 Total pages: 2	Time allowed: 3 hours

All questions are to be attempted:

1. Solve the following calculation problems (10 marks)
 - 1.1. What is the percentage concentration of 50 g ointment containing 600 mg of zinc oxide?
 - 1.2. On preparing 800 ml of colored cosmetic dispersion, the formulator used 5.0 g of black iron oxide powder. What is the percentage concentration of the pigment?
 - 1.3. Add 12 kg +440 g +240mg. Express the final results in grams
 - 1.4. How many liters of a mouthwash can be prepared from 150 mL of clove oil if the concentration in question is 1.0% (v/v)?
 - 1.5. How many grams of iron oxide black should be mixed with 500 g mascara to increase its concentration from 2.0% to 8.0% (w/w).
2. Formulation additives play key roles in the formulation and stability of cosmetic preparations. Give short account on the following additives (12 marks):
 - 2.1. Chelating agents
 - 2.2. pH modifiers
 - 2.3. Exfoliant
3. Preservation is a critical step in the developmental stage of any formulation, including cosmetic products. Discuss the role of preservative as a supportive ingredient in cosmetic preparations and their classification, given examples when possible (6 marks).
4. Suspension is a dosage form commonly found in many cosmetic preparations. Discuss the possible methods used to stabilize the following (8 marks):
 - 4.1. Pigments, with special emphasis on the polymeric dispersants and their anchoring mechanisms.
 - 4.2. Sunscreens

5. Discuss in details each of the following: (24 marks)

5.1-Methods employed for solubilization of poorly soluble materials and enumerate examples for cosmetics prepared as solution form.

5.2- Stability problems related to emulsion formulation and the use of emulsion stabilizers.

5.3- Classification of ointment bases.

5.4- Lipsticks can pose a variety of problems which can impact the performance and stability of the final product, Discuss troubleshooting lipsticks.