

**AQ-578A**

**Faculty of Cosmetic Technology**  
**M.Tech. (Cosmetics Technology)**  
**Semester-I (New) Examination**  
**PRODUCT DEVELOPMENT AND FORMULATION**  
**(Common for all Branches)**  
**Paper—1-T-3**

Time : Three Hours]

[Maximum Marks : 80

**INSTRUCTIONS TO CANDIDATES**

- (1) All questions carry equal marks.
  - (2) Answer **FIVE** questions.
  - (3) Illustrate your answers wherever necessary with the help of neat sketches.
  - (4) Use pen of Blue/Black ink/refill only for writing the answer book.
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1. Discuss the physico - chemical properties of substances with reference to their effect on formation of product. 16
  2. Discuss the formulation and development of denitrifices, Write in brief the raw-materials employed in formulation of dentifrices. Discuss the formulation of tooth gels. 16

**OR**

Describe the formulation and development of cosmetic suspension. Discuss industrial processing of "Calamine lotion" with its master formula. 16

3. Write in detail the steps involved in development of new cosmetics. Add a note on limitations of screening procedures in cosmetics. 16
4. How do you scale up a product from laboratory scale to large scale? 16
5. Write notes on :
  - (a) Aerosol – formulation and development.
  - (b) Raw materials used to develop shampoo. 16

**OR**

Describe in detail :

- (a) Controlled released cosmetics.
- (b) Use of nano-technology in development of new cosmetics. 16