

Duration: 3 Hours

Total marks: 75

N.B.: 1. All questions are compulsory  
2. Figures to the right indicate full marks.

- Q I Multiple Choice Questions (Answer all):** **20**
- 1 Which of the following best describes cosmeceuticals? **1**
    - a) Purely cosmetic products
    - b) Pharmaceuticals for treating skin conditions
    - c) Products combining cosmetic and pharmaceutical properties
    - d) Herbal supplements for skin health
  
  - 2 What characterizes quasi drugs? **1**
    - a) They are strictly regulated by health authorities
    - b) They are not considered medications but have therapeutic effects
    - c) They have no therapeutic benefits
    - d) They are primarily used for recreational purposes
  
  - 3 Which of the following is an example of a rheology modifier? **1**
    - a) Vitamin C
    - b) Xanthan gum
    - c) Titanium dioxide
    - d) Parabens
  
  - 4 Which of the following is a commonly used preservative in cosmetic products? **1**
    - a) Sodium bicarbonate
    - b) Sodium benzoate
    - c) Coconut oil
    - d) Vitamin A
  
  - 5 Which of the following is a property of non-ionic surfactants? **1**
    - a) High foaming capacity
    - b) Strong acidity
    - c) Stability in a wide range of pH levels
    - d) Excellent disinfectant properties
  
  - 6 Which of the following properties is typically associated with cold creams? **1**
    - a) Heat-generating effects on the skin
    - b) Lightweight and quickly absorbed texture
    - c) Emollient and moisturizing properties
    - d) High alcohol content for a refreshing sensation

- 7 Which of the following surfactants is commonly used in the formulation of high-performance face washes for oily skin? **1**
- a) Sodium lauryl sulfate
  - b) Cocamidopropyl betaine
  - c) Sodium cocoyl isethionate
  - d) Polysorbate 80
- 8 Ammonia is added to hair dyes **1**
- a) as substrate for attachment of intermediates
  - b) as primary intermediate
  - c) as coupler
  - d) for diffusion of colour into the fibre
- 9 Tooth sensitivity is due to **1**
- a) Exposure of dentin
  - b) Tartar formation
  - c) Plaque
  - d) Halitosis
- 10 Which of the following is an example of a physical sunscreen ingredient? **1**
- a) Titanium dioxide
  - b) Avobenzone
  - c) Cinnamate
  - d) Octinoxate
- 11 Nimbidin is the major chemical constituent of **1**
- a) Neem
  - b) Henna
  - c) Aloe vera
  - d) Turmeric
- 12 Total Viable count limit in cfu/g in skin creams is **1**
- a) Not more than 1000
  - b) Not more than 1500
  - c) Not more than 2500
  - d) Not more than 3000

- 13 Mexameter measures two major components of skin pigmentation: **1**
- a) keratin and hemoglobin
  - b) melanin and globulin
  - c) eumelanin and globulin
  - d) melanin and hemoglobin
- 14 Corneometer is used as an analytical tool for \_\_\_\_\_ cosmeceutical product. **1**
- a) Sun protection product
  - b) Moisturizing product
  - c) Anti-acne product
  - d) Tooth product
- 15 Following is the benefit of turmeric, except **1**
- a) Protects from sun damage
  - b) Reduces risk of skin cancer
  - c) Helps treat psoriasis
  - d) Reduces hair fall
- 16 BIS of skin cream is: **1**
- a) 6608:2004
  - b) 6608:2010
  - c) 6356:2004
  - d) 6356:2010
- 17 Ethylene glycol distearate is added to shampoos as \_\_\_\_\_ **1**
- a) Primary surfactant
  - b) Opacifier
  - c) Preservative
  - d) Solubilizer
- 18 For the treatment of seborrheic dermatitis \_\_\_\_\_ is used as a rinse-off product. **1**
- a) Salicylic acid 1.8-3%
  - b) Aluminium chlorohydroxide 5-6%
  - c) Zinc chloride 1.2-2%
  - d) Cyclomethicone 10%
- 19 \_\_\_\_\_ is used to treat hyperhidrosis. **1**
- a) Selenium sulphide
  - b) Almond oil
  - c) Aluminium chlorhydrate
  - d) Salicylic acid
- 20 Wrinkle formation is due to **1**
- a) Loss of melanin
  - b) Malassezia infection
  - c) Overactive Sebaceous glands
  - d) Fibrosis

**Q II Answer any Two questions: 20**

- 1 a) Explain the concept of cosmeceuticals and how they differ from traditional cosmetics. 5  
Provide examples to illustrate their unique characteristics.
- b) Write in short about preservatives used in cosmetics products. 5
- 2 Discuss the chemistry and formulation of Paraphenylene diamine based hair dyes. 10
- 3 a) Write a note on Clove in oral care cosmetic products. 5
- b) Write the BIS specifications for non-fluoridated toothpaste. Discuss determination of foaming power test for toothpaste. 5

**Q III Answer any Seven questions: 35**

- 1. Explain the role of rheology modifiers in cosmetic formulations along with examples. 5
- 2. Write the importance of occlusives in skincare formulations and their impact on skin barrier function. 5
- 3. Differentiate between cold creams and vanishing creams. 5
- 4. Discuss the formulation of a conditioning shampoo. 5
- 5. How do you determine sun protection factor? 5
- 6. Write a note on Henna in hair care cosmetic products. 5
- 7. Differentiate between Sebumeter and Tewameter. 5
- 8. Explain the causes and treatment of prickly heat. 5
- 9. Write a note on the cosmetic problem of 'Blemishes'. 5

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