

## SARDAR PATEL UNIVERSITY

## SEMESTER EXAM, M.Sc. INDUSTRIAL CHEMISTRY

## SEMESTER -1, PS01EICH05- TECHNOLOGY OF ESSENTIAL OIL, SURFACTANTS AND COSMETIC PRODUCTS

07-12-2012, TIME: 10:30 a.m TO 1:30 p.m

Total Marks: 70

Note: Attempt all questions. Draw neat and labeled diagram where ever necessary. Figures on the right show marks.

Q.1. Answer the following MCQs.

(08)

1. \_\_\_\_\_ compound is present in clove oil.

A. t-butyl phenol B. Isopropanol C. Eugenol D. Citral

2. The \_\_\_\_\_ method of distillation uses direct contact of steam and material.

A. Water distillation B. Water and Steam distillation C. Steam distillation D. Azeotropic

3. Water and Steam distillation uses \_\_\_\_\_ steam.

A. Dry B. Wet C. Super heated D. High pressure steam

4. In dispersion \_\_\_\_\_ of solid is practically prepared in a liquid medium.

A. Mixture B. Solution C. Slurry D. Suspension

5. \_\_\_\_\_ type of emulsion shows high electrical conductivity.

A. O/W B. W/O C. Both A and B D. None of these.

6. \_\_\_\_\_ represents no. of surfactant molecules in micelle.

A. HLB B. CMC C. CST D. Aggregation number

7. \_\_\_\_\_ in antiperspirant blocks the openings of sweat glands.

A. Astringent B. Humectant C. Emollient D. Surfactant

8. \_\_\_\_\_ is not cosmetic.

A. Face Powder B. Cream C. Comb D. Lipstick

**Q. 2 Answer the following short questions. (Any 7) (14)**

1. What is Defluage?
2. Enlist various chemical components of essential oil.
3. What are micells?
4. What is the role of HLB in surfactant?
5. What are the special features of structures of surfactant molecule?
6. Differentiate between essential oil and fixed oil.
7. What are cosmetics?
8. Differentiate between deodorant and anti-perspirant.
9. What are humectants?

**Q.3 (a) Define essential oil and explain briefly various distillation techniques for its production. (06)**

**Q.3 (b1) Explain the functions of essential oil in plants. (03)**

**Q.3 (b2) Discuss the principle of extraction with volatile solvents. (03)**

**OR**

**Q.3 (b1) Write a short note on Maceration. (03)**

**Q.3 (b2) Discuss the criteria for solvent selection for extraction with volatile solvents. (03)**

**Q.4 (a) What are surface active agents? Explain their effect on surface tension of liquid. (06)**

**Q.4 (b) Explain the following surface active properties of surfactant:(Any One)**

1. Emulsion
2. Micelle formation

**Q.5 (a) Discuss the classification of surfactants giving examples of each class. (06)**

**Q.5(b) Explain the technology of AOS in brief. (06)**

**OR**

**Q.5 (b) Explain the technology of Soap in brief. (06)**

**Q.6 (a)** Discuss various aspects which separates cosmetics from drugs. Also give their classification on the basis of their end use on human body. (06)

**Q.6 (b)** Explain in brief the technology of Face powder (06)

**OR**

**Q.6(b)** Explain in brief the technology of Shampoo. (06)

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**Best Of Luck**