

**M.Sc. IV Semester Degree Examination, Sept./Oct. - 2024****INDUSTRIAL CHEMISTRY****DSE 3 : C : Manufacturing of Common Materials****(NEP)**

Time : 3 Hours

Maximum Marks : 70

**Note :** (i) Answer **any five** questions including **Q.No.1**.(ii) **Q.No.1** is **compulsory**.

1. (a) What are essential oils ? Mention their sources and constituents.  
(b) Discuss the theories of glyceride structure.  
(c) What are the important constituents of oil seeds ?  
(d) How shampoos are manufactured ? Explain briefly. **4+3+3+4=14**
  
2. (a) What are the raw materials used in the cosmetic industry ? Classify them.  
(b) Discuss the ICH guidelines for formulations.  
(c) Explain the analytical methods for the development of stabilities of cosmetics. **5+5+4=14**
  
3. (a) Explain the manufacture of natural rubber.  
(b) Discuss the synthesis and applications of Buna-N rubber.  
(c) Explain the pre-processing techniques used in the leather industries. **5+4+5=14**
  
4. (a) Explain the manufacture of baking powder.  
(b) What are fire retardant chemicals ? How they are used in fertilizer industry ?  
(c) Explain the synthesis of ammonia by Haber's process. **5+4+5=14**
  
5. (a) Discuss the recovery of chemicals from black liquor.  
(b) Explain the manufacture of pulp by Kraft's method. Mention the reactions involved.  
(c) Discuss the manufacturing of Rayon. **5+5+4=14**



- 6.** (a) Describe the chemical constituents in cosmetic materials.  
(b) Explain following (i) Microbiological counts (ii) bioburdon  
(c) Explain the process of obtaining the natural rubber from a rubber plantation. **5+5+4=14**
- 7.** (a) Write a note on classification of rubber.  
(b) Discuss the chrome tanning and vegetable tanning in leather industries.  
(c) Explain the synthesis of phosphoric acid and phosphates. **5+5+4=14**
- 8.** (a) Explain the synthesis of nitric acid.  
(b) Describe the manufacture of urea and cyanamide.  
(c) Discuss the making of paper by Frurdniner process. **5+5+4=14**

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