# DDD-1576

**M. Sc. (Part - II) Examination**

April/May - 2016

**Industrial Chemistry : Paper - I**

(Chemistry in Industry-II)

**Instructions:**

(1) Name of the Examination: M. Sc. (Part - II)

(2) All questions are compulsory.

(3) Figures to the right indicate full marks of the questions.

## Question 1

1. Answer any three from the following: 18
   
   (a) Describe sources, sink and control of NO\(_x\) pollution.
   
   (b) What is greenhouse effect? Explain its adverse effects.
   
   (c) Describe the classification and efficys of ionizing radiations on human.
   
   (d) Describe Winkler's method of DO determination.

## Question 2

2. Answer any three from the following: 18

   (a) Explain the term anaerobic and aerobic fermentation. Discuss the production of amino acids.

   (b) What are perfumes and perfumery chemicals? Give the broad classification of perfumes.

   (c) Define paint, pigments and varnishes. Discuss the different components of paints. Explain water based paints.

   (d) Explain the terms hydrogenation, polymerization and rancidity of oil. Discuss the disadvantages of soaps over synthetic detergents.
Answer any three from the following:
(a) Write a brief note on organo phosphorous and carbonate pesticides.
(b) Explain detergent biodegradation. Name the different biosurfactants with their chemical structures.
(c) Discuss the characteristics of explosives. Give the preparation of nitrocellulose, cordite and TNT.
(d) Explain the classification of pesticides. Give the synthesis of Aldrin, malathion BHC.

Answer any four from the following:
(a) Explain briefly waste classification and disposal.
(b) Discuss the effects of non-ionizing radiation on life.
(c) Write a note on global warming and its effects on environment.
(d) What is essential oil? Discuss the isolation process for essential oils.
(e) Write a note on products from fermentation industries.
(f) Describe the manufacturing of anionic and nonionic detergents.