No. of Printed Pages : **2**

21ICH4E4L

Sl. No.

M.Sc. IV Semester Degree Examination, Sept./Oct. - 2024

INDUSTRIAL CHEMISTRY

Food Industry and Agrochemicals

(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) Mention the sources and functional properties of carbohydrates.

(b) Outline the types and properties of lipids.

(c) Discuss the classification and sources of proteins.

(d) Write a note on saturated, unsaturated fatty acids. **4+3+3+4=14**

2. (a) Discuss the microbes found in raw materials and food.

(b) Describe the newer and rapid method for qualitative assay for microbes.

(c) Write a note on microbial interactions. **5+5+4=14**

3. (a) What is saponification number ? Discuss it's determination.

(b) Give the estimation of Raiboflavin content of foods by Fluorimetric method.

(c) Discuss the determination of free fatty acid value. **5+5+4=14**

4. (a) Explain the various principles of preservation of foods.

(b) Write how food can be preserved from dehydration and concentration.

(c) Write a note on cold preservation of food. **5+5+4=14**

5. (a) Discuss the classification of insecticides with examples.

(b) Give synthesis and uses of DDT and methoxychlor.

(c) Write a note on Inorganic and organic fungicides. **5+5+4=14**

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6. (a) Give the procedure for estimation of the thiamine content.
(b) Explain basics of stress adaptation and implications in new-generation foods.
(c) Write a note on microbial interactions. **5+5+4=14**

7. (a) Write a note on food additives.
(b) Explain immersion freezing and cryo freezing of food.
(c) Write a note on synthesis of calcium arsenate. Mention its's side effects. **5+5+4=14**

8. (a) What is the concept of triple point in freeze drying process ? Write in short Dehydro-freezing.
(b) Write a note on synthesis of lead arsanate.
(c) Give the synthesis of chloradane and Heptachlor. **5+5+4=14**

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