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PG (CBCS)
M.SC. Semester- IV Examination, 2026
CHEMISTRY

PAPER: CEM 404

(CHEMICAL PRINCIPLES IN FOOD SCIENCE AND TECHNOLOGY)

Full Marks: 40

Time: 2 Hours

The figures in the right-hand margin indicate full marks.

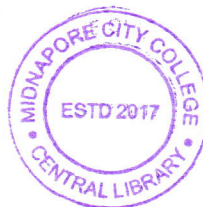
Candidates are required to give their answers in their own words as far as practicable.

GROUP-A

1. Answer any **FOUR** of the following questions:

2×4=8

- a) What is osmotic dehydration.
- b) What do you mean by 'virgin oil'?
- c) What types of gases are used in MAP?
- d) Define hydrogenation of oil.
- e) What is saponification value?
- f) Define fire point of oil.



GROUP-B

2. Answer any **FOUR** of the following questions:

4×4=16

- a) What are the benefits of eating fruits and vegetables?
- b) Briefly describe the advantages and disadvantages of osmotic dehydration.
- c) Describe briefly the process of pasteurization of milk.
- d) Write down the objectives of BIS?
- e) Define Polenske number and Reichert-Meissl number.
- f) Define HDL and LDL. What is trans fat?

GROUP-C

3. Answer any **TWO** of the following questions:

2×8=16

- a) Describe briefly the preparation of tomato ketchup.
- b) Describe briefly the ingredients and different types of bacteria present in milk.
- c) Write short notes on
 (i) Preservative, (ii) Antioxidant, (iii) Emulsifier, (iv) iodine value
- d) Briefly describe rancidity of fats and oils. What is food poisoning?

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