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PG/4th Sem/CEM/19

2019

M.Sc.

4th Semester Examination

CHEMISTRY

Paper - CEM 404

Full Marks : 40

Time : 2 Hours

*The figures in the margin indicate full marks.
Candidates are required to give their answers
in their own words as far as practicable.*

1. Answer any *four* questions from the following :

2×4=8

- (a) What is the full form of "PUFA" ? Name two food sources of "PUFA".
- (b) What is meant by toned milk ?
- (c) What do you mean by LDL AND HDL ?
- (d) What do you mean by 'virgin oil' ?
- (e) Mention the conditions for deodorization.

[Turn Over]

- (f) Name two food sources of saturated fatty acids.
- (g) Explain the factor on which milk composition depends.
- (h) What do you mean by “winterization” ?

2. Answer any *four* questions from the following :

4×4=16

- (a) (i) Define fruit juice.
(ii) What are the changes that happen during ripening of fruit ?
- (b) (i) Write the steps in the preparation of fruit juice and pulp processing.
(ii) Give the flow-sheet for clarified fruit juice production.
- (c) (i) Mention different fruit sorting method.
(ii) Name different types of extractor used for the extraction of fruit juice.
- (d) (i) Name different types of processes for the production of fruit juice.
(ii) What are the objectives of using clarification and fining steps during fruit juice production ?

(3)

- (e) (i) Name two enzymes used for fruit juice clarification.
- (ii) What do you mean by Millard reaction ?
- (f) (i) What is Gerber Test ?
- (ii) What do you mean by MBR test ? How is it linked to microbiological quality of milk ?
- (g) (i) Name one bleaching agent for milk.
- (ii) Write the different conditions for Pasteurization.
- (h) (i) Write the difference between triglyceride and phospholipid.
- (ii) What do you mean by UHT processed milk ?
3. Answer any *two* questions from the following :

8×2=16

- (a) (i) What is the full form of FSSAI AND BIS ?
- (ii) What is adulteration ?
- (iii) Give the names of three adulterants and oil and fat.

[Turn Over]

(4)

- (iv) How can we detect the presence of such adulterant in fat and oil by chemical method ? 2+2+1+3
- (b) (i) What is food safety and why is it needed ?
(ii) Write the babcock test for purity of milk.
(iii) How do we detect the presence of Adulterants in vanaspati Ghee ?
(iv) How to test the presence of starch in pure milk ? 2+2+2+2
- (c) (i) What is saponification value ?
(ii) What peroxide value ?
(iii) How many types of lipids are present ? Give schematic diagram.
(iv) What are the functions of fat in human body ?
- (d) (i) Give the flow diagram for dehydration of fruits.
(ii) What are recombined milk, toned milk, malted milk, cream, cheese and butter ? 2+6
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