18NDU02

PSG COLLEGE OF ARTS & SCIENCE

(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2018

(First Semester)

Branch - NUTRITION, FOOD SERVICE MANAGEMENT & DIETETICS

CHEMISTRY OF FOODS

Time: Three Hours Maximum: 75 Marks

SECTION-A (10 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** marks (10x1 = 10)

1 pH indicates_____ .
(i) Hydrogen ion concentration (ii) osmolarity
(iii) Acid no. (iv) hydrogenation

2 Non Nutrient components of foods are '
(i) Pigments (ii) Nucleic acids
(iii) Enzymes (iv) All the above

3 Natural emulsifying agent is
(i) Oil (ii) Phospho lipids
(iii) Phospho proteins (iv) gel

4 Fructose is a_____ .
(i) Disaccharide (ii) Pentose
(iii) Aldose (iv) Ketose

5 Gel formation depends on_____ .
(i) Degree of methylation of pectin (ii) pH
(iii) TSS (iv) All the three

6 Amount of the fatty acids is indicated by_____ .
(i) Saponification No. (ii) Iodine No.
(iii) Acid No. (iv) Reichert-Meissl no.

7 Lecithin is an example for_____ .
(i) Lipo protein (ii) Phospho lipids
(iii) Glyco lipids (iv) Sulpho lipids

8 Methionine is a_____ .
(i) Mono amino mono carboxylic acid
(ii) Mono amino di carboxylic acid
(iii) Sulphur containing acid
(iv) Di amino mono carboxylic acid

9 In the conversion of chlorophyll into pheophytin Magnesium ions are replaced by
(i) Hydrogen (ii) Nitrogen
(iii) Oxygen (iv) Carbon

10 Maillard reaction is due to_____ .
(i) Enzymic browning (ii) oxidation of PUFA
(iii) Oxidation of Ascorbic acid (iv) Sugar amino reaction

Cont...

SECTION - B *(25* Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** Marks (5 x 5 = 25)

11 a Describe any one method for determination of moisture.

OR

b Prepare a short note on individual uniformity and individual variability.

12 a Illustrate and outline the structure of milk emulsion.

OR

b Describe a 1) sol 2) gel and 3) colloid

13 a Narrate the chemistry of cellulose.

OR

b Sketch the structure of proteins.

14 a Classify fatty acids with examples and structures.

OR

b Describe Sap No. Iodine No. and Acid No.

15 a Describe the effect of cooking on chlorophyll.

OR

b Classify and explain natural and synthetic flavoring components.

SECTION -C (40 Marks!

Answer **ALL** questions

ALL questions carry **EQUAL** Marks (5 x 8 = 40)

16 a Elucidate the composition of foods.

OR

b Discuss the structure and functions of water.

17 a Highlight the nature of emulsion and the function of emulsifier with examples.

OR

b Enumerate the types of foams and explain the factors affecting foam formation and stability.

18 a Enumerate the types of rancidity and steps to prevent them.

OR

b Categorize the types of carbohydrates with examples and structures.

19 a Highlight the classification of lipids with examples and structures.

OR

b Trace the types of proteins with examples based on their biological functions.

20 a Examine the reactions in enzymic browning.

OR

b Outline the water soluble pigments with structures and changes occur during cooking.

z-z-z END