18FPB16

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BVoc DEGREE EXAMINATION DECEMBER 2022
(Third Semester)

Branch - FOOD PROCESSING TECHNOLOGY

FOOD CHEMISTRY

Time: Three Hours Maximum: 50 Marks

SECTION-A (5 Marks)

Answer **ALL** questions
ALL questions carry **EQUAL** marks (5 x 1 = 5)

1 Identify an example for water in oil emulsion.
(i) Milk (ii) Butter
(iii) Cream (iv) Ice cream

2 Indicate the simplest form of carbohydrates that cannot be hydrolyzed further.
(i) Oligosaccharides (ii) Monosaccharides
(iii) Disaccharides (iv) Polysaccharides

3 Number of mg of KOH required to neutralize the acetic acid obtained by saponification of 1g of fat after it has been acetylated
(i) Acetyl value (ii) Saponification value
(iii) RM number (iv) Polenske value

4 When subjected to heat, pH extremes, alcohol, and physical or chemical disturbances, proteins undergo
(i) Denaturation (ii) Reduction
(iii) Renaturation (iv) Oxidation

5 Name the pigments responsible for the red, purple and blue color of fruits, vegetables and flowers.
(i) Anthocyanin (ii) Xanthones
(iii) Chlorophyll (iv) Carotenoids

SECTION - B (15 Marks)

Answer **ALL** Questions
ALL Questions Carry **EQUAL** Marks (5 x 3 = 15)

6 a Explain the terms- refractive index, conductivity.
OR
b Discuss on surface tension and interfacial tension.

7 a Analyze the effect of water activity on chemical stability of foods.
OR
b Discuss on gelatinization of starch.

8 a Explain – smoke, flash and fire point.
OR
b Discuss – melting, softening and slipping point of fats.

Cont...

9 a Sketch out the classification of enzymes.

OR

b Identify the factors affecting enzyme activity.

10 a Narrate the role of antioxidants in food processing.

OR

b Compare natural and artificial colors.

SECTION -C (30 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** Marks (5 x 6 = 30)

11 a Outline the diphasic colloidal dispersions important in foods.

OR

b Summarize the physico chemical properties of foods.

12 a Examine the unusual properties of water.

OR

b Discuss on Maillard reaction and its significance in food industry.

13 a Inspect the plasticity, shortening and emulsifying properties of fats and oils.

OR

b Elaborate on rancidity and suggest methods to prevent rancidity.

14 a Elucidate on functional properties of protein.

OR

b Analyze the effect of heat treatment on proteins.

15 a Appraise on the stability and degradation of vitamins during cooking and processing.

OR

b Categorize the types of flavors providing a short note on it.

Z-Z-Z END