

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BVoc DEGREE EXAMINATION DECEMBER 2024
(Fourth 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 Show the range of water activity scale.
(i) 0 to 1 (ii) 1 to 10
(iii) 0 to 10 (iv) 1 to 100
- 2 Identify the ketose sugar.
(i) Fructose (ii) Maltose
(iii) Glucose (iv) Ribose
- 3 What indicates the degree of unsaturation of a fat or oil?
(i) Saponification number (ii) Acetyl value
(iii) RM value (iv) Iodine number
- 4 Match: Linkage between amino acids
(i) Ionic bond (ii) Glycosidic bond
(iii) Peptide bond (iv) Covalent bond
- 5 Choose the water- soluble pigment in fruits and vegetables
(i) Chlorophyll (ii) Carotenoids
(iii) Anthocyanin (iv) Lycopene

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

- 6 a Define- density, plasticity.
OR
b Explain hydrogen ion concentration.
- 7 a Draw the structure of starch and explain.
OR
b Infer the reduction reaction of monosaccharides.
- 8 a Describe interesterification of fats.
OR
b Define- melting, softening, and slipping point.

Cont...

- 9 a Comment on the gelation and foaming properties of protein.
OR
b Explain renaturation of proteins.
- 10 a Provide examples for natural and artificial colours.
OR
b Discuss the role of flavour intensifiers.

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

- 11 a Narrate the theories of gel formation.
OR
b Highlight the importance of water activity.
- 12 a Explain Maillard reaction.
OR
b Infer the diverse applications of carbohydrates in the food industry.
- 13 a Discuss the functional properties of fats.
OR
b Differentiate hydrolytic and oxidative rancidity.
- 14 a Analyze the physical and chemical properties of proteins.
OR
b Examine the structure of protein.
- 15 a Interpret the changes in the pigment- anthocyanin during cooking.
OR
b Categorize flavor component of meat, vegetables, and fruits.

Z-Z-Z

END