# PSG COLLEGE OF ARTS & SCIENCE (AUTONOMOUS)

### **BVoc DEGREE EXAMINATION DECEMBER 2024**

(Fourth Semester)

### **Branch - FOOD PROCESSING TECHNOLOGY**

#### FOOD CHEMISTRY

ne: ˈ	Three Hours		Maximum: 50	0 Marks
	Answer	ALL q	uestions	$(5 \times 1 = 5)$
	(i) 0 to 1	(ii) 1	to 10	
1	(i) Fructose	` '		
(	(i) Saponification number	(ii)	Acetyl value	
•	(i) Ionic bond	(ii)	•	
(	(i) Chlorophyll	(ii)	Carotenoids	
SECTION - B (15 Marks) Answer ALL Questions ALL Questions Carry EQUAL Marks (5 x 3 = 15)				
a b	OR			
a b	Draw the structure of starch and explain.  OR  Infer the reduction reaction of monosaccharides.			
a b	Describe interesterification of fats.  OR  Define- melting, softening, and slipping point.			
	a b a b a	Answer ALL questions Show the range of water activit (i) 0 to 1 (iii) 0 to 10  Identify the ketose sugar. (i) Fructose (iii) Glucose  What indicates the degree of un (i) Saponification number (iii) RM value  Match: Linkage between amino (i) Ionic bond (iii) Peptide bond  Choose the water- soluble pigm (i) Chlorophyll (iii) Anthocyanin  SECTION Answer ALL Question  a Define- density, plasticity. OR b Explain hydrogen ion concert a Draw the structure of starch a OR b Infer the reduction reaction of a Describe interesterification of OR	SECTION-A (SAnswer ALL questions carry)  Show the range of water activity scale.  (i) 0 to 1 (ii) 1 (iii) 1 (iii) 0 to 10 (iv)  Identify the ketose sugar.  (i) Fructose (ii) (iii) Glucose (iv)  What indicates the degree of unsaturati (i) Saponification number (ii) (iii) RM value (iv)  Match: Linkage between amino acids (i) Ionic bond (ii) (iii) Peptide bond (iv)  Choose the water- soluble pigment in ff (i) Chlorophyll (ii) (iii) Anthocyanin (iv)  SECTION - B (1)  Answer ALL Q  ALL Questions Carry  a Define- density, plasticity.  OR  b Explain hydrogen ion concentration a Draw the structure of starch and exp  OR  b Infer the reduction reaction of mono a Describe interesterification of fats.  OR	SECTION-A (5 Marks) Answer ALL questions ALL questions carry EQUAL marks  Show the range of water activity scale. (i) 0 tol (ii) 1 to 10 (iii) 0 to 10 (iv) 1 to 100  Identify the ketose sugar. (i) Fructose (ii) Maltose (iii) Glucose (iv) Ribose  What indicates the degree of unsaturation of a fat or oil? (i) Saponification number (ii) Acetyl value (iii) RM value (iv) Iodine number  Match: Linkage between amino acids (i) Ionic bond (ii) Glycosidic bond (iii) Peptide bond (iv) Covalent bond  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  a Define- density, plasticity. OR  b Explain hydrogen ion concentration. a Draw the structure of starch and explain. OR b Infer the reduction reaction of monosaccharides. a Describe interesterification of fats. OR

Cont...

## 23FPB421 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

 $(5 \times 6 = 30)$ 

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.

OF

b Categorize flavor component of meat, vegetables, and fruits.

Z-Z-Z

**END**