

Roll No: _____

JAMIA HAMDARD
Department of Chemistry
School of Chemical and Life Sciences (SCLS)
MSc Chemistry, III Semester
End term Examination 2023

Paper Name: Food Chemistry-II
Time: 3 hours

Paper Code: MCHOE-408
Maximum Marks: 75

SECTION A

Marks BTL CLO PLO
(10 x 2 = 20)

Attempt ANY TEN of the following:

- | | | | | | |
|-------|---|---|-----|-------|-----|
| I. | Write the reactions Arabino-Xylan oxidase with phenol. | 2 | 2 | 2/3 | 2 |
| II. | Define “zero calorie” food products. | 2 | 1 | 3/4 | 1 |
| III. | How myoglobin and haemoglobin differ in their Hill plot. | 2 | 1 | 3/4 | 1 |
| IV. | Write various components of coffee seed. | 2 | 2 | 3/5 | 3 |
| V. | Classify fishes based on their source. | 2 | 2 | 2/3 | 3/4 |
| VI. | How carbon dioxide is responsible for the development of chicken from eggs | 2 | 2 | 1/2/3 | 3/4 |
| VII. | Briefly Explain the role of SO ₂ in wine industries | 2 | 2 | 1/2 | 3 |
| VIII. | Role of NO in Red meat storage | 2 | 1/2 | 1/2 | 3 |
| IX. | Write the chemical transformation taking place in cheese giving meaty smell to the cheese. | 2 | 2 | 2/3 | 2 |
| X. | Briefly classify Kumis based on pH and alcoholic content. | 2 | 1 | 2/3 | 2 |
| XI. | Define “celiac diseases”. | 2 | 1 | 3/4 | 1/2 |
| XII. | Explain with the help of graph between Force and length of grain for deciding the quality of grain. | 2 | 1 | 3/4 | 4/5 |

SECTION B

(2 x 10 = 20)

Q2. Attempt ANY TWO of the following:

- | | | | | | | |
|------|----|--|---|---|-----|-------|
| I. | A. | What are the methods of determining the purity of Dairy products | 5 | 5 | 5/6 | 5/6 |
| | B. | How formation of yoghurts can be assessed through glass transition | 5 | 6 | 2/5 | 4/5 |
| II. | A. | Briefly Explain morphology of grains | 5 | 4 | 2/4 | 4/5/6 |
| | B. | Explain the significance of Osborne fraction in classification of various protein in grains | 5 | 6 | 2/3 | 3/4 |
| III. | A. | Explain how assessment of vitamins in vegetable can be used in deciding the storage conditions. | 5 | 5 | 5/6 | 5 |
| | B. | Explain with the help of any two example for justifying concentration of oxidase and oxidoreductase plays crucial role colours of vegetables | 5 | 6 | 2/5 | 4/5 |
| IV. | A. | How hill plots are use full in preservation of meat. | 5 | 6 | 2/4 | 4 |
| | B. | Differentiate between red meat, white meat and fish meat based on their various proteins. | 5 | 4 | 2/3 | 3/4 |
| | C. | | | | | |

SECTION C

(7 x 5 = 35)

Q3 Attempt ALL of the following.

I.	How UV studies can helpful in optimisation of preservation condition of meats.	5	5/6	3/6	3/4
	Or				
	What is Q value are assessed for optimisation packaging conditions and expiry date of fish products.	5	5/6	3/6	2/3/4
II.	What are omega amines. Why we add NaNO ₂ before freezing a raw meat.	5	5/6	4/5	3
	Or				
	What are various defence proteins in yolk and albumin of an egg. Why determination of transferrin is an highly important aspect in egg storage.	5	5/6	5/6	6
III.	How sugar is produced from <i>Beta vulgaris</i> .	5	5/6	3	2/3/4
	Or				
	How sugar is produced from <i>Saccharum officinarum</i> .	5	5/6	3	2/3/4
IV.	What is the role of stereochemical aspects of Ascorbic Acid during douching and kneading.	5	5/6	4/5	5
	Or				
	Briefly Explain the possible reason for development of sour taste in wheat flour.	5	5/6	4/5	5
V.	Why are Amyloinositols are important in studying tensile strength of a grain.	5	2/3	1,2	4
	Or				
	How grains get infection?	5	2/3	1,2	4
VI.	What are chemical hazards in Dairy products.	5	3/4	5	3
	Or				
	Briefly justify the changes in spherical volume of milk micelles during ultracentrifugation results aggregation of milk.	5	3/4	5	3
VII.	How CO ₂ is useful in preservation, determination and quality assurance of alcohol beverage.	5	3/4	4/5/6	5
	Or				
	Differentiate between the dry and wet processing of coffee from coffee seed.	5	3/4	2/3/4	3

-----xXx-----