Name:

Enrolment No:

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, December 2022

Course: Fundamentals of Food Science **Semester: I**

Program: M.Sc. (Nutrition and Dietetics) **Duration: 3 Hours**

Course Code: HSND7002 **Max. Marks: 100**

Instructions:

S. No.	Section A Short answer questions/ MCQ/T&F (20Qx1.5M= 30 Marks)	Marks	COs
Q 1			
1	Define decortication process.	1.5	CO 1
2	Favism is a haemolytic anaemia. Is it true or false?	1.5	CO 1
3	List the examples of primary processing and secondary processing.	1.5	CO 1
4	State the advantages of parboiling.	1.5	CO 1
5	Differentiate between whole grain product and refined product.	1.5	CO 1
6	Define the term. (a) Retrogradation (b) Gelatinization	1.5	CO 1
7	Discuss clarification of milk.	1.5	CO 2
8	Casein constitute 80% of the total nitrogen of the milk. Is it true or false?	1.5	CO 2
9	Define meat tenderization.	1.5	CO 2
10	How much percentage of Ca present in whole casein of milk?	1.5	CO 2
11	Which enzyme is responsible for the coagulation of milk?	1.5	CO 2
12	Differentiate between myosin and actomyosin.	1.5	CO 2
13	How coagulation occurs in milk?	1.5	CO 2
14	Name some volatile flavor compounds.	1.5	CO 3
15	What prevent sugar from crystalizing?	1.5	CO 3
16	Define smoking point of fat.	1.5	CO 3
17	Explain the term winterisation.	1.5	CO 3
18	How enzymatic browning can be prevented?	1.5	CO 3
19	Enlist the types of sugar available in market (At least 4).	1.5	CO 3
20	How can acid and alkali affect plant pigments on cooking?	1.5	CO 3

Section B (4Qx5M=20 Marks)			
Q 1			
1	**Discuss the nutritional composition of wheat grain.**	**5**	**CO 1**
2	**Discuss the proteins present in meat?**	**5**	**CO 2**
3	**Classify the types of rancidity. How it can be prevented?**	**5**	**CO 3**
4	**Discuss emulsion. Give some examples of emulsifying agent.**	**5**	**CO 3**
Section C (2Qx15M=30 Marks)			
Q 1			
1	**Discuss the following: (a) Classify water soluble and water insoluble plant pigments. (5 marks) (b) Discuss the factors that affect the plant pigments on cooking. (5 marks) (c) Enlist some flavour and bitter compounds present in vegetables. (5 marks)**	**15**	**CO 4**
2	**Thomas is preparing ragi cupcakes and wants to do the following sensory evaluation test. Discuss the format of the following sensory testing methods in details. (a) Duo-trio test (5 marks) (b) 9-point hedonic test (5 marks) (c) Triangle test (5 marks)**	**15**	**CO 5**
Section D (2Qx10M=20 Marks)			
Q 1			
1	**(a) What are the changes that occur during ripening of fruits? (5 marks) (b) Write a short note on storage of fruits and vegetables (5 marks)**	**10**	**CO 4**
2	**(a) Discuss any four texture parameters of mango leather. (4 marks) (b) Enlist the equipment that are used to measure the color and texture of mango leather. Discuss the working principles of both the equipment. (6 marks)**	**10**	**CO 5**