

# RE-TEST EXAMINATION, 2021

Semester: III

Subject code: FPT-301

Subject: Introduction to Food Processing Technology

Full Marks: 70 = (Part A-25 + Part B-45)

Duration: 3 hours



Instructions:

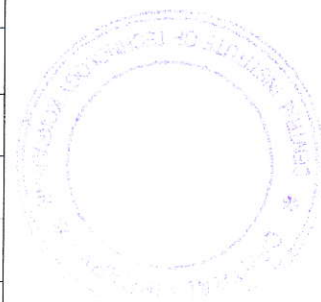
1. Questions on Part A are compulsory
2. Answer any five questions from Part B

PART-A		
MARK-25		
Questions no.	Questions	marks
<b>Question 1</b>	<b>Fill in the blanks:</b>	<b>1x10=10</b>
1a	----- is the source of nutrients and provides energy for the activities of human body.	
1b	The chemical components that maintain life and growth of a person are called -----.	
1c	Carbohydrate, protein and ----- are the nutrients that provide energy.	
1d	Proteins provide ----- amount of available energy.	
1e	Disaccharides contain two ----- units.	
1f	----- is a polysaccharide found in plant cell walls.	
1g	Apples contains ----- and due to this reason they are used in jam and jelly making.	
1h	In D-configuration of sugars, the highest numbered asymmetric carbon has the OH group directed to the -----, in Fischer projection formula.	
1i	Fats and oils function as carriers of fat -----.	
1j	Radurization is considered as equivalent to -----.	
<b>Question no.2</b>	<b>Write true or false:</b>	<b>1x10=10</b>
2a	Food irradiation is a food preservation method where food is exposed to ionizing radiations.	
2b	Removal of water from food occurs by sublimation during freeze	

	drying.	
2c	Preservatives are chemical agents which retard undesirable changes in food.	
2d	Preservation is temporary if the growth of microorganisms is inhibited.	
2e	Fatty acids of $\omega$ -3 and $\omega$ -6 types are the two important essential fatty acids.	
2f	Pasteurization of milk is conducted at 62.8°C for 30min.	
2g	Butyric acid contain 3 no. of carbon.	
2h	Fermented products are readily digestible.	
2i	Carrot is rich source of Vitamin A.	
2j	In mammals vitamin D is required for calcium absorption.	
<b>Question no. 3</b>	<b>Choose the correct answer</b>	<b>1x5=5</b>
Q 3a	Whole milk contains important proteins	
	i. Caseins and whey proteins      iii. Only caseins ii. Only whey proteins      iv. Caseins and skim milk	
3b	Gluten proteins consist of	
	i. Gliadins and glutenins      iii. Gliadins and albumins ii. Glutenins and albumins      iv. Glutenins and prolamins	
3c	Function of packaging are	
	i. Protection of the product      iii. Preservation of the product ii. Promotion of the product      iv. All of the above	
3d	Beri-beri is caused due to deficiency of	
	i) Vitamin B <sub>1</sub> ii) Vitamin B <sub>2</sub> iii) Vitamin B <sub>6</sub> iv) Vitamin B <sub>12</sub>	
3e	Amino acids are building blocks of	
	i) Proteins ii) Fats iii) Carbohydrates iv) Enzymes	

<b>PART-B, MARK-45</b>		
Questions no.	Questions	marks
<b>Question no. 4</b>	<b>Answer the following questions:</b>	<b>3×3=9</b>

Q4a	Write three aims of food science and technology.	
Q4b	Enlist the three classes of nutrients based on their role in biological system.	
Q4c	Give examples of three disaccharides with their food sources.	
<b>Question no.5</b>	<b>Answer the following questions:</b>	<b>3×3=9</b>
Q5a	Write three names of polysaccharides and their food sources.	
Q5b	Write three properties of starch.	
Q5c	Enlist some uses of starch.	
<b>Question no. 6</b>	<b>Answer the following questions:</b>	<b>3×3=9</b>
Q6a	What is a triglyceride? Explain with example.	
Q6b	What are omega-3 and omega-6 fatty acids?	
Q6c	Define rancidity. Explain the types of rancidity.	
<b>Question no. 7</b>	<b>Answer the following questions:</b>	<b>3×3=9</b>
Q7a	What is fatty acid? What are saturated and unsaturated fatty acids? Explain with example.	
Q7b	How does the minerals present in food determined? Give two examples of trace elements and their importance in human.	
Q7c	What is fermentation? What are the types of fermentation process?	
<b>Question no. 8</b>	<b>Answer the following questions:</b>	<b>5+4=9</b>
Q8a	100kg unripe mangoes was harvested with an average moisture content of 64% (wb) and dried to 18% (wb). Calculate the weight of mangoes after drying and write the composition of the dried mangoes.	5
Q8b	Write a note on the basic principles of food preservation.	4
<b>Question no. 9</b>	<b>Answer the following questions:</b>	<b>4.5×2=9</b>
Q9a	'Microorganisms important in foods'-justify the statement with three examples.	
Q9b	What are reducing sugar and non-reducing sugar? Give example of each one with proper structure.	
<b>Question no. 10</b>	<b>What is drying? What are the purpose of drying? Write about different methods of drying</b>	<b>9</b>



<b>Question no. 11</b>	What are the natural preservatives? Explain the preservation process using natural preservatives.	9
<b>Question no. 12</b>	Write in detail about various intrinsic and extrinsic factors which influence microbial activity.	9

