

**GURU NANAK INSTITUTE OF TECHNOLOGY**  
**An Autonomous Institute under MAKAUT**  
**2020-2021**  
**FOOD PROCESSING TECHNOLOGY-I**  
**(CEREALS,FRUIT,VEGETABLES,BEVERAGES)**  
**FT 501**

**TIME ALLOTTED: 3 Hours**

**FULL MARKS: 70**

*The figures in the margin indicate full marks.*

*Candidates are required to give their answers in their own words as far as practicable*

**GROUP – A**

**(Multiple Choice Type Questions)**

Answer any *ten* from the following, choosing the correct alternative of each question: **10×1=10**

		<b>Marks</b>	<b>CO No</b>
1.	(i) Which of the following is a method to delay the onset of spoilage on storage? a) Spray/dip in water/ wax formulations b) Fumigation c) Spray/dip in water/wax formulations/Fumigation d) None of the mentioned	1	CO1
	(ii) Which of the following holds well as a reason for the storage of food at low temperatures? a) Respiration rate decreases b) Growth of microbes decreases c) Humidity is less d) All of the mentioned	1	CO1
	(iii) Which of the following microorganism is popular for spoilage in fruits and vegetables? a) Mesophile b) Thermophile c) Psychrophile d) All of the mentioned	1	CO1
	(iv) Which of the following is needed in order to establish a refrigeration requirement? a) Initial temperature of food b) Specific heat of food c) Amount of food to be placed in a room d) All of the mentioned	1	CO2
	(v) The physical property that influences the deterioration of grain is _____ a) Its flow properties b) Absorption, adsorption and desorption c) Porosity and its tendency towards layering d) All of the mentioned	1	CO2

(vi)	Which of the following factor affects the moisture content in a grain bulk? a) Season b) Climate c) Distribution of moisture in the grain d) All of the mentioned	1	CO1
(vii)	Liquid pectin is commercially prepared from a) papaya b) guava c) pomegranate d) none of these	1	CO3
(viii)	The only inorganic acid permitted to food is a) hydrochloric acid b) sulfuric acid c) phosphoric acid d) citric acid	1	CO4
(ix)	The volatile toxic component formed during roasting of coffee beans is a) caffeine, b) 2-thiofuran, c) chicory, d) none of these.	1	CO4
(x)	Minerals bound in chlorophyll a) Ca b) Mg c) Fe d) Mn	1	CO4
(xi)	The slope of the climacteric varies with _____ a) Maturity b) Species c) Oxygen and carbon-di-oxide content of the storage chamber d) All of the mentioned	1	CO2
(xii)	Maximum FFA Content allowed in potato chips is a) 2.5% b) 2.8% c) 1.8% d) 1.5%	1	CO2

**GROUP – B\***

**(Short Answer Type Questions)**

Answer any *three* from the following: **3×5=15**

		<b>Marks</b>	<b>CO No</b>
2.	What are the in-storage drying methods? Briefly discuss the methods	5	CO1
3.	Briefly Discuss the Continuous flow drying methods for cereals	5	CO1

**B. TECH/FT//ODD/SEM-V/FT501/R18/2020-2021**

4.	(a)	Write some sources of infestation in grains	2	CO2
	(b)	What are the basic steps for insect control	3	CO2
5.	(a)	Which type of organisms mainly attack the jams and jellies and why?	2	CO3
	(b)	Discuss about weeping of jelly	3	CO3
6.	(a)	Write short note on anticaking agent	3	CO4
	(b)	Sweetener	2	CO4

**GROUP – C\*****(Long Answer Type Questions)**Answer any *three* from the following: **3×15=45**

			<b>Marks</b>	<b>CO No.</b>
7.	(a)	Discuss principles of storage of grains	4	CO1
	(b)	Briefly discuss the traditional storage systems	6	CO1
	(c)	spotlight on the storage structures in India	5	CO1
8.	(a)	What is modified starch and What are the modification methods?	6	CO2
	(b)	Draw and discuss the production methodology of potato chips	5	CO2
	(c)	Write the advantages and disadvantages of conditioning (Drying)	4	CO2
9.	(a)	FDA stands for ?	1	CO4
	(b)	What is coloring agent? Name two artificial coloring agents.	2	CO4
	(c)	Artificial sweetener is safe or not –Explain?	3	CO4
	(d)	Example three artificial sweetener.	3	CO4
	(e)	Example few name of antioxidants and explain their mode of action.	6	CO4
10.	(a)	Short note Chlorophyll	5	CO4
	(b)	Carotenoid	5	CO4
	(c)	Tannin and xanthophyll	5	CO4
11.	(a)	What is preservation?	2	CO3
	(b)	Antioxidant is store in freeze drier-Explain?	5	CO3
	(c)	Chilling defect of freeze dryer-explain.	2	CO3
	(d)	What is thickening agent?	2	CO4
	(e)	Examples of two thickening agent.	2	CO4
	(f)	What are the major functions of thickening agent?	2	C04