

**NATIONAL INSTITUTE OF TECHNOLOGY DURGAPUR****Even Semester End-term Examination, 2021-22****Course Code:** BTO441

Full Marks: 30

**Course Name:** Food Biotechnology

Time: 90 Minutes

Question Paper No.: NITDGP/BT441/1

Date of Exam: 29/04/2022

Instructions: Answer all the questions.

Materials to be supplied: Graph paper shall be supplied, if required.

Question No.	Body of the Question	Marks	Mapped CO
1	What is the difference between sterilization and cold sterilization?	4	CO1
2	Why is meat more buffered than fruits?	2	CO1
3	Why does microbial growth cease at high temperature?	2	CO1
4	How does carbon dioxide protect food from spoilage?	2	CO1
5	How does irradiation effect Food quality?	5	CO1 CO2
6	Define the following terms: a) Radaapertization b) Radicidation c) Radurization d) Botulinum Cook e) Appertization	5	CO1 CO2
7	Expand HACCP. State the principles of HACCP.	1+5	CO5
8	The most probable spore load in a canned food is 100 and the D <sub>0</sub> of the spore is 1.5 min. Calculate a target F <sub>0</sub> for a thermal process such that the probability of spoilage is 1 in 100,000. If under the same conditions <i>C. botulinum</i> type B has a D <sub>0</sub> of 0.2 min, would the target F <sub>0</sub> value satisfy the minimum 12D process for <i>C.botulinum</i> . Assume an initial spore load of 1 per can for <i>C.botulinum</i> .	2+2	CO2

Course Outcomes

CO1:

CO2:

CO3: