

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATION- 2025

B.Tech-VIII Semester (BT/BI)

COURSE CODE (CREDITS): 21B1WBT831(03)

MAX. MARKS: 35

COURSE NAME: Food Processing and Engineering

COURSE INSTRUCTORS: Dr Anil Kant, Dr Ashok Nadda

MAX. TIME: 2 Hours

Note: (a) All questions are compulsory. (b) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

Q.No	Question	CO	Marks
Q1	a. Recognise the general characteristics of lactic acid bacteria? Enlist all twelve genera as per latest classification and segregate seven genera that have significance with respect to food.	CO II	6
	b. Identify key characteristics, significance and important species and of any three of following genera in food or food environments i) Lactococcus ii) Streptococcus iii) Tetragenococcus iv) Leuconostoc		
Q2	a. Describe the general design and working and uses of any three of following equipments i) Pulping Equipments ii) Spray dryers iii) V cone tumbling mixer iv) Tunnel or Bin dryer v) Bowl Centrifuge	Co III	9
Q3	Attempt any three of following questions a. What is koji? identify different types of koji and the role of koji in soya or rice based fermented foods. Briefly explain how "tane koji" is prepared. b. Enlist different types of mechanical separations and discuss separation by sedimentation in detail. Calculate terminal velocity of particles of 20µm in diameter. Given density of particle 500 kg m ⁻³ , viscosity of air 1.8x10 ⁻⁵ Nsm ⁻² , density of air 1.2 kg m ⁻³ c. Write a detailed note on importance, nutritional contents, organism involved manufacturing process end products and taste and texture of "Natto". d. Write a note on end products formed in Soyu, including the compound that give characteristics taste and flavours (Umami) to soya sauce	CO II	12
Q.4	What are the basic requirements of packing material? Discuss following food packaging material and or packaging technologies i) metal ii) glass ii) controlled atmosphere packaging	CO V	4
Q.5	What guidelines do you need to follow for locating a food processing industry?	CO III	4