

Prof. Gunjan Goel

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
END TERM EXAM (May-2015)
B.Tech. (BT VIII Sem)

COURSE CODE: 11BIWBT834

MAX. TIME: 3 Hours

COURSE NAME: Fermented Food Product Technology

MAX. MARKS: 45

COURSE CREDITS: 3

Note: All questions are compulsory.

Section A

(Marks: 1x10= 10)

Q1. Answer the following in brief:

- i. Why dairy industries add nonfat dry milk in fermented milk products like curd or yoghurt?
- ii. How you will differentiate between dahi and yoghurt in terms of starter composition and activity?
- iii. Name the cheese variety with the eyes. Name the organism responsible and the cause of the eye formation
- iv. Why the calcium salts are generally added during the cheese production stages?
- v. What are the different forms of yeasts available commercially? Which form is more active?
- vi. Name the different fractions of milk proteins having biological activities.
- vii. What kind of alcoholic beverage can be produced by fermenting milk? Give an account on the starters used to produce these products.
- viii. Discuss the role of *Brevibacterium linens* in cheese production.
- ix. What do you mean by accelerated ripening of cheese?
- x. What is the role of adjunct cultures?

Section B

(Marks: 3x5=15)

2. Sauerkraut fermentation is a result of series of overlapping stages with succession of microorganisms. How? Discuss the role of each stages with microbial community involved.
3. The characteristic flavor of different varieties of cheese is due to metabolic activity of starters on carbohydrate, proteins as well as lipids. Justify the statement by commenting on different cheese flavor compounds.
4. You are provided with a traditional fermented dairy beverage with alcoholic content. What will be your strategies to identify a novel starter culture? Describe the key factors which can affect the activity of the starters.
5. How the dairy starters are classified? Differentiate between kefir, koumiss, yoghurt and dahi in terms of starter cultures

6. What is the role of leavening agent in the bread? Elaborate on the role of enzymes during different stages of bread manufacturing process

Section C

(5x4=20)

7. How the acetic acid fermentation is different from ethanolic and lactic acid fermentation. Discuss in terms of the starters and their metabolic activities.
8. The molds form an equally important microbial group responsible for food fermentations. How? Elaborate your answer with example using fermented cereal and dairy based product.
9. What is the need of ageing during wine production? Discuss the chemical reactions alongwith their effects on wine characteristics.
10. Discuss the major bioactive functional components in the milk. What kind of functional properties are possessed by the milk proteins? Describe the methods to derive these functional protein fractions.

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