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Std 10 (English)

Science And Technology - II

Date 30-09-20

Time 1HRS

Chapter 7.00

Marks 20

**Q.1 Multiple Choice Questions 2**

- 1 ..... form the colonies of useful microbes in alimentary canal and control other microbes and their metabolic activities, improve resistance.  
 a. Carbohydrate      b. Vitamins      c. Probiotics      d. Proteins

**Ans** Option c.

- 2 Substance prepared by using dry yeast on commercial basis is  
 a. Bread      b. Yoghurt      c. Vinegar      d. Cheese

**Ans** Option a.

**Q.2 Find the odd one out 2**

- 1 Yoghurt, Cream, Toffee, Cheese

**Ans** Toffee

- 2 Lactobacillus lactic, Lactobacillus cremoris, Streptococcus thermophiles, Streptococcus bovis

**Ans** Streptococcus bovis

**Q.3 Find co-related terms 1**

- 1 Yoghurt : Lactobacilli : : Bread : .....

**Ans** Yoghurt : Lactobacilli : : Bread : **Saccharomyces cerevisiae**

**Q.4 State True or False 2**

- 1 Hydrogen gas is considered as fuel in future

**Ans** Hydrogen gas is considered as fuel in future - **True**

- 2 Probiotics are harmful to humans

**Ans** Probiotics are harmful to humans - **False**

**Q.5 Name the following 2**

- 1 Contents of Yeast

**Ans** Carbohydrates, Fats, Proteins, Vitamins, Minerals, Minerals.

- 2 Fermented milk products.

**Ans** Yoghurt, Buttermilk, Cheese, Cream

**Q.6 Laws / Define / Principles 4**

- 1 Define Applied Microbiology

**Ans** Branch of biology in which study of the enzymes related to some prokaryotes and eukaryotic microbes, proteins, applied genetics, molecular biology, etc. is performed; is called as applied microbiology.

**2 Define Industrial Microbiology**

**Ans** Science is related to commercial use of microbes in which various economic, social and environment related processes and products are included. Various microbial processes useful for this purpose are carried out.

**Q.7 Distinguish between(Any One)****2****1 Yoghurt product and Probiotics.**

	<b>Yoghurt product</b>	<b>Probiotics</b>
i.	Yoghurt is a much product with the help of lactobacillus	Milk products with active bacteria.
ii.	Milk is boiled and once it cools to warm temperature, bacterial strains of Streptococcus thermophilus and Lactobacillus delbrueckii are added to it in 1:1 proportion.	microbes maintain the balance of intestinal microorganisms i.e. increase the population of microbes helping the digestion.

**2 Applied Microbiology and Industrial Microbiology**

	<b>Applied Microbiology</b>	<b>Industrial Microbiology</b>
i.	Branch of biology in which study of the enzymes related to some prokaryotes and eukaryotic microbes, proteins, applied genitive, molecular biology etc... is performed.	This science is related to commercial use of microbes in which various economic social and environment related process and products are product.
ii.	This study is used for the society and various products like food, medicines	Various microbial processes useful for this purpose are carried out.

**Q.8 Answer the following in detail****5**

**1** Cheese is produced on large scale from the abundantly available cow milk all over the world. First, chemical and microbiological tests of milk are performed. Some colours and microbes like Lactobacillus lactis, Lactobacillus cremoris, and Streptococcus thermophilus are mixed with milk. It imparts sourness to the milk. After this, to impart the dense texture, whey (water in yoghurt) needs to be removed. An enzyme, rennet obtained from alimentary canal of cattle was being traditionally used earlier. However, an enzyme protease obtained from fungi is used at present to produce vegetarian cheese. The whey is separated from yoghurt (which has some other uses). Then, process of production of cheese is started through steps like cutting the solid yoghurt into pieces, washing, rubbing, salting, and mixing of essential microbes, pigments and flavors. Then, cheese is pressed and cut into pieces and stored for ripening.

- i. Give any two microbes used in cheese production. (1)
- ii. Why the cheese is stored? (1)
- iii. What enzyme is used to prepare vegetarian cheese?(1)
- iv. What processes are involved in cheese production? (2)

**Ans** i. Lactobacillus lactis, Lactobacillus cremoris, and Streptococcus thermophilus. [ any 2]  
 ii. The cheese is stored for ripening as to increase the flavour.  
 iii. An enzyme protease obtained from fungi is used at present to produce vegetarian cheese.  
 iv. Process of production of cheese is started through steps like cutting the solid yoghurt into pieces,

washing, rubbing, salting, and mixing of essential microbes, pigments and flavors.