

Register Number:

B.TECH DEGREE EXAMINATIONS: APRIL/MAY 2014

(Regulation 2009)

Fifth Semester

BIOTECHNOLOGY

BTY116: Food and Nutrition Biotechnology

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. If fat content of milk increase, the specific gravity-----
 - a) Decrease
 - b) Increase
 - c) Increase and decrease
 - d) Remain the same
2. Which method makes the stomach smaller and allows the food bypass part of the intestine?
 - a) Jaw wiring
 - b) Stapled gastroplasty
 - c) Gastric banding
 - d) Gastric bypass
3. Wheat is biofortified with
 - a) Iron and Zinc
 - b) Zinc and Sodium
 - c) Iron and Sodium
 - d) Zinc and Vitamin A
4. Corynebacterium synthesises
 - a) Amino acid
 - b) Histidine
 - c) Lysine
 - d) Guanine
5. Which of the following is used in the manufacturing of cheese?
 - a) Fatty acid
 - b) Low lactase
 - c) Amylase
 - d) Beta lactoglobulin
6. Which of the following is an important compound will emulate the compound human milk?
 - a) Isomalto oligosaccharide
 - b) Milk Casein
 - c) Xylo oligosaccharide
 - d) Lactoferrin
7. On consuming less meat and more fruits and vegetables cancer can be prevented by
 - a) 10-30%
 - b) 20-30%
 - c) 30%
 - d) 30-40%
8. The compound which prevents neural tube defect is
 - a) Potassium
 - b) Folic Acid
 - c) Calcium
 - d) Docosahexanoic acid
9. Which enzymes hydrolyse starch structure?

- a) Pullanase
 - b) Amylase
 - c) Protease
 - d) Lipase
10. A probiotic culture, bacterium that ferments lactose to D- and L-lactate in a ----- ratio
- a) 60%:40%
 - b) 60%:20%
 - c) 40%:60%
 - d) 20%:60%

PART B (10 x 2 = 20 Marks)

11. List the four approaches to develop functional foods
12. What is an interface, list the factors which affect surface tension?
13. Define synbiotics.
14. Define biofortification with suitable examples.
15. What is food safety?
16. List the methods of organic farming.
17. What are the biotechnological methods for manufacturing animal feed?
18. What are the steps involved in the production of transgenic animals?
19. List the properties of *Saccharomyces cerevisiae*.
20. What are the enzymes important in food processing?

PART C (5 x 14 = 70 Marks)

21. a) Explain the physical properties of foods in detail.

(OR)

 - b) (i) Describe the analysis and molecular design of functional foods. (8)
 - (ii) Write a note on different types of artificial sweeteners with suitable examples. (6)
22. a) (i) What is a functional food? (2)
- (ii) Write in detail about industrial production of healthier foodstuffs. (12)

(OR)

 - b) What is probiotics, explain in detail about its strains, its health benefits and disadvantages?
23. a) Explain the biotechnological aspects of poultry and egg.

(OR)

 - b) Explain the correlation of genetic marker with beverage and meat quality.
24. a) What are the functional foods to be consumed to prevent cardiovascular disease and obesity?

(OR)

b) What is a nutraceutical, write about the different types of nutraceuticals with examples?

25. a) What is the impact of probiotic lactic acid bacteria on functional foods?

(OR)

b) Explain the various bacterial food additives in detail.
