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Question Paper Code: 59901

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2018

Elective

Chemical Engineering

15UCH901- FOOD SCIENCE AND TECHNOLOGY

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. FSSAI stands for: CO1- R
 - (a) Food Safety and Standards Authority of India
 - (b) Food Safety Satisfy All India
 - (c) Food Safely Storage Authority of India
 - (d) Food Storage Standards Authority of India
2. Indian Institute of Food Processing Technology (IIFPT) situated in which place of Tamilnadu CO1- R
 - (a) Madurai
 - (b) Chennai
 - (c) Thanjavur
 - (d) Coimbatore
3. Carbohydrates are composed of ____ and _____. CO2- R
 - (a) carbon, water
 - (b) hydrogen, oxygen
 - (c) zinc, aluminum
 - (d) gold, calcium
4. Carbohydrates and proteins provide about ____ calories per gram. CO2- R
 - (a) 5
 - (b) 4
 - (c) 2
 - (d) 6

5. Cool storage is considered any temperature from ____° to ____°F. CO3- R
 (a)28, 68 (b)18, 48 (c)28, 78 (d)32, 58
6. Sediment and microorganisms can be removed centrifugally in a ____ CO3- R
 (a) tube (b) clarifier (c) pan (d) box
7. To achieve continuous pasteurization in milk, the milk needs to be heated to 161°F for ____ seconds. CO4- R
 (a) 15 (b) 20 (c) 10 (d) 5
8. Canning of fruits and vegetables are a _____ process. CO4- R
 (a) cold (b) heat (c) irradiation (d) microwave
9. ____ is an alcoholic beverage made from fermented grape juice CO5 -R
 (a)wine (b) beer (c)scotch (d)whisky
10. Irradiation causes undesirable flavor changes in ____ products. CO5- R
 (a)dairy (b) grain (c)meat (d)vegetables

PART – B (5 x 2= 10Marks)

11. Write down the scope of food science. CO1- R
12. What are the two major types of food colors? Give an example CO2- R
13. List out any four preliminary food processing methods. CO3- R
14. Explain the process of Fermentation CO4- R
15. How germination affects the nutritional value of pulses? CO5- R

PART – C (5 x 16= 80Marks)

16. (a) Discuss the current scenario of food processing industries in India CO1-U (16)

Or

- (b) Discuss about the engineering properties of food and its applications in food industries. CO1-U (16)

17. (a) Discuss the functional properties of proteins and list out their commercial uses. CO2-U (16)

Or

- (b) Classify food additives. Explain the utility and functions of antioxidants and chelating agent as food additives. CO2-U (16)

18. (a) (i) Explain the principle and working functions of multiple effect evaporator with suitable examples from food industry. CO3-U (8)

- (ii) How will you evaporate heat sensitive materials? CO3-U (8)

Or

- (b) (i) Elaborate about food preservations by irradiation. CO3-U (8)

- (ii) Discuss about the safety of irradiated foods. CO3-U (8)

19. (a) Write a note on refrigerated and frozen food preservation. Explain the factors involved in preservation. CO4- U (16)

Or

- (b) Write in detail about the design considerations for packaging food products. CO4- U (16)

20. (a) Write a detailed note on the manufacture of bread and cookies with neat flow charts. CO5- U (16)

Or

- (b) Explain the methods of pasteurization and explain in detail about the milk powder manufacturing process with neat flow diagram. CO5- U (16)

