

B. SC. FOOD SCIENCE & TECHNOLOGY
SEMESTER-1ST
FOOD CHEMISTRY
BFST-105

Duration: 3 Hrs.

Marks: 70

Part : A (Objective) = 20

Part : B (Descriptive) = 50

[PART-B : Descriptive]

Duration: 2 Hrs. 40 Mins.

Marks: 50

[Answer question no. One (1) & any four (4) from the rest]

1. Classify carbohydrates with examples. Briefly explain the process of caramalization. 5+5=10
2. How does essential amino acid differ from non essential one? Write the classification of protein based on chemical nature & solubility. Write down the structures of two amino acids, containing aliphatic side chains. 2+6+2=10
3. What are the properties of amino acid? Write in brief about protein structure. Write some characteristics of denaturation. 3+4+3=10
4. What do you mean by Emulsion & Emulsifier? Draw the structure of one essential fatty acid & write its nutritional importance. Write a short note on hydrogenation. 4+3+3=10
5. Write short notes on stability of water soluble vitamins. Mention in brief about Vitamin B1 & B2 deficiency diseases. Enlist Macro & Micro Minerals. 3+3+4=10
6. Draw the molecular structure of water as per Lewis concept and explain any four properties of water. 2+8=10
7. What are Food Additives? Explain the natural and synthetic food coloring agents? 2+8=10
8. Write nomenclature and classification of enzyme. What are the uses of enzymes in food industry? 6+4=10

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[PART-A : Objective]

Choose the correct answer from the following :

1X20=20

1. Algin is _____.
 - a. A polysaccharide.
 - b. A lipid.
 - c. A protein.
 - d. A pro-vitamin.
2. Many co-enzymes are _____.
 - a. Metals.
 - b. Vitamins.
 - c. Proteins.
 - d. Substrates.
3. Which of the following pairs of carbohydrates are anomers of each other?
 - a. α Glucose & β Fructose.
 - b. α Glucose & β Glucose.
 - c. α Glucose & α Mannose.
 - d. All of the above.
4. With the oxidation of aldehydic carbon of glucose ,compound formed is
 - a. Fructonic acid.
 - b. Galactonic acid.
 - c. Gluconic acid.
 - d. Manoic acid.
5. Lactose is
 - a. Monosaccharide.
 - b. Disaccharide.
 - c. Oligosaccharide.
 - d. Polysaccharide.
6. Which of the following is an essential fatty acid?
 - a. Lauric acid.
 - b. Arachidic acid.
 - c. Palmitic acid.
 - d. Arachidonic acid.
7. Number of carbon atom in stearic acid is
 - a. 12
 - b. 16
 - c. 18
 - d. 20
8. DHA is
 - a. Docosaheptaenoic acid.
 - b. Docosaheptaenoic acid.
 - c. Dichlorohexaenoic acid.
 - d. Dimethyl heptanoic acid.
9. Ovumucoid is the protein found in
 - a. Fruits.
 - b. Vegetables.
 - c. Milk.
 - d. Egg.
10. The nitrogen containing compound in lecithin is
 - a. Guanine.
 - b. Ethanolamine.
 - c. Choline.
 - d. Ammonium acetate.
11. Zein is a protein found in
 - a. Wheat.
 - b. Rice.
 - c. Egg.
 - d. Maize.
12. The synthetic form of Vitamin K is
 - a. Menadione.
 - b. Menadol.
 - c. Melanine.
 - d. None of the above.
13. The water activity (a_w) of pure water is
 - a. 0.54.
 - b. 0.71.
 - c. 0.92.
 - d. 1.0.
14. The term pH stand for
 - a. Presence of Hydrogen.
 - b. Positive Hydrogen.
 - c. Potential of Hydrogen.
 - d. Power of Hydrogen.

UNIVERSITY OF SCIENCE & TECHNOLOGY, MEGHALAYA



[PART (A) : OBJECTIVE]

Duration : 20 Minutes

Serial no. of the
main Answer sheet

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- 15. Solution of salt in water is called as
 - a. Vinegar.
 - b. Cider.
 - c. Juice.
 - d. Brine.

- 16. Which of the following is not a natural color?
 - a. Paprika oleoresin.
 - b. Chlorophyll.
 - c. Sunset yellow.
 - d. Annato.

- 17. Carrot is a rich source of
 - a. Protein.
 - b. Fat.
 - c. Carotene.
 - d. Carbohydrates.

- 18. BIS stands for
 - a. Bureau of International Standards.
 - b. Bureau of Indian System.
 - c. Bureau of Indian Standards.
 - d. Bharat Import Standards.

- 19. CFTRI is situated at
 - a. Mysore.
 - b. Pune.
 - c. Luckhnow.
 - d. Delhi.

- 20. In hard water, which of the following salts is/are present?
 - a. Sodium Chloride.
 - b. Magnesium Sulphate.
 - c. Sodium Bi-carbonate.
 - d. All of the above.

Course :

Semester : Roll No :

Enrollment No : Course code :

Course Title :

Session : 2017-18 Date :

Instructions / Guidelines

- The paper contains twenty (20) / ten (10) questions.
- Students shall tick (✓) the correct answer.
- No marks shall be given for overwrite / erasing.
- Students have to submit the Objective Part (Part-A) to the invigilator just after completion of the allotted time from the starting of examination.

Full Marks	Marks Obtained
20	

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Scrutinizer's Signature

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Examiner's Signature

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Invigilator's Signature