

NATIONAL COUNCIL FOR HOTEL MANAGEMENT
AND CATERING TECHNOLOGY, NOIDA
ACADEMIC YEAR 2017-2018

COURSE : 2nd Semester of 3-year B.Sc. in H&HA
SUBJECT : Principles of Food Science
TIME ALLOWED : 03 Hours MAX. MARKS: 100

(Marks allotted to each question are given in brackets)

Q.1. (a) Define Food Science.
(b) Define flavour and classify it. (5+5=10)

Q.2. Discuss the effects of dry and moist heat on starch.
OR
What are the factors affecting gelatinization of starch? List the uses of carbohydrates in food preparation. (10)

Q.3. What do you mean by rancidity of fats and oils? What measures will you take to prevent rancidity, while storing fats and oils? (10)

Q.4. Write briefly on the various functional properties of protein.
OR
Discuss the uses of fats and oils in food preparation. (10)

Q.5. Explain the **five** sensory evaluation methods of food.
OR
What do you mean by food processing? Discuss the various objectives of food processing. (10)

Q.6. What is emulsion? Differentiate between oil / water and water / oil emulsion. Discuss briefly the role of emulsifying agent in food preparation. (2+6+2=10)

Q.7. Differentiate between a solution, colloidal dispersion and a suspension.

OR

What are the application of colloid systems in food preparation?

(10)

Q.8. Give brief description of the following:

- (a) Denaturation of proteins
- (b) Classification of carbohydrates

(5+5=10)

Q.9. Differentiate between (**any five**):

- (a) Essential and non-essential amino acids
- (b) Difference and descriptive test
- (c) Leavening and shortening agent
- (d) Enzymatic and non-enzymatic browning
- (e) Hydrogenation and polymerization
- (f) Inversion and caramelization

(5x2=10)

Q.10. Fill in the blanks with the appropriate word:

- (a) Milk is an example of _____ emulsions (water in oil / oil in water).
- (b) _____ is the enzyme responsible for undesirable browning in food (phenol oxidase, amylase).
- (c) Heating of dry starch is known as _____ (caramalization/ dextrinization).
- (d) The continuous phase is sol is _____ (sol / liquid).
- (e) Triangle test is a _____ test (discrimination test / descriptive test).
- (f) Iodine number is the measure of the extent of _____ fatty acids present in fats and oils (saturated / unsaturated).
- (g) Hydrolysis of sugar to glucose and fructose in presence of acid is an example of _____ (inversion / caramalization).
- (h) The gum and free fatty acids present in fats are removed by _____ (neutralization / bleaching).
- (i) _____ is an example of class 1 preservative (salt / sodium benzoate).
- (j) _____ is the bond which unites two amino acids in proteins (glycosidic/ peptide).

(10x1=10)
