

NATIONAL COUNCIL FOR HOTEL MANAGEMENT
AND CATERING TECHNOLOGY, NOIDA
ACADEMIC YEAR 2015-2016

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. Define food science and discuss the relationship of food science with food chemistry, food micro-biology and food processing. (10)
- Q.2. Define emulsion. Discuss two types of emulsion (O/W, W/O). State the role of emulsifying agent. (10)
- Q.3. What are Fats and Oils? Differentiate between them.
- OR**
- Discuss the functional properties of proteins i.e. Viscosity, Foamability, Gelation and Emulsification. (10)
- Q.4. Differentiate between amylose and amylopectin. Explain the factors affecting starch gel formation. (10)
- Q.5. Define Enzymatic Browning in food. How will you prevent enzymatic browning reactions? (10)
- Q.6. Give brief description of the following:
(a) Dextrinisation (b) Gelatinisation (5+5=10)

Q.7. Explain the sensory evaluation of food quality.

OR

Discuss the types of colloidal system.

(10)

Q.8. Explain the following terms (**any five**):

- | | |
|------------------------------|-------------------|
| (a) Pasteurisation | (b) Winterisation |
| (c) Denaturation of proteins | (d) Syneresis |
| (e) Food rheology | (f) Food enzyme |
| (g) Reaction maillard | |

(5x2=10)

Q.9. Explain the classification of food flavours.

OR

What are the objectives of food processing? Describe **two** food preservation methods.

(10)

Q.10. Fill in the blanks:

- HTST stands for _____.
- Rancidity occurs in _____.
- Polyphenolase is _____ which causes enzymatic browning.
- _____ is natural emulsifying agent.
- _____ compound is formed in maillard reaction.
- the protein gluten is present in _____.
- _____ is the natural pigment in tomatoes.
- _____ is a crystalloid.
- _____ is a proteolytic enzyme present in pineapple.
- Dry heating of starch is known as _____.

(10x1=10)
