

(Following Paper ID and Roll No. to be filled in your
Answer Books)

Paper ID : 182407

Roll No.

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B.TECH.

Theory Examination (Semester-IV) 2015-16

FOOD CHEMISTRY & NUTRITION

Time : 3 Hours

Max. Marks : 100

Section-A

**1. Attempt all parts. Write answers of each part in short.
(10X2=20)**

- (a) What do you understand by water activity?
- (b) Enlist the functions of carbohydrates.
- (c) Explain maillard reaction.
- (d) What do you mean by gelatinization of starch?
- (e) Define the term intermediate moisture foods.
- (f) What is lypolysis?

- (g) Give the function of antioxidants?
- (h) What is retrogradation?
- (i) Which carbohydrate decomposition product contributes to produce distinctive flavor?
- (j) What is P.E.R., and biological value of protein?

Section-B

2. Attempt any five questions. (10×5=50)

- (a) Explain why chapatti develops brown color on baking? Discuss the phenomenon.
- (b) What do you mean by refining of oils? Explain the process of refining in detail.
- (c) Discuss the causes for the loss of vitamins and minerals during processing and storage.
- (d) Describe the effects of heat treatment on the stability and nutritive value of protein.
- (e) Differentiate between the hydrolytic rancidity and oxidative rancidity. Suggest the effective methods to prevent them.

- (f) What do you understand by denaturation of protein? Discuss the factors affecting it.
- (g) What is mal nutrition and over nutrition? Enlist the essential nutrients along with their deficiency diseases.
- (h) What are RDI and RDA? What is calorific value of food and how it can be determined?

Section-C

Attempt any two questions.

(15×2=30)

- 3. What are the methods of improving the consistency of fats? Discuss them in detail.
- 4. Explain the functional properties of proteins. How can these properties be modified during processing and storage?
- 5. Discuss the structure of chlorophyll. How can it be preserved during processing and preservation ?