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

Paper ID : 182403   Roll No. [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]

B.TECH.

Theory Examination (Semester-IV) 2015-16

FOOD CHEMISTRY AND NUTRITION

Time : 3 Hours   *Max. Marks : 100*

Note : Attempt questions from each section as per directions.

Section-A

1.   Attempt all questions. All questions carry equal marks.

$(2 \times 10 = 20)$

(a)   What do you understand by hysteresis?

(b)   What is BMR value?

(c)   What do you mean by hydrolytic rancidity?

(d)   What are glycosides?

(e)   What are antioxidants?

(f)   Differentiate between enrichment and restoration.

(g)   What is lipolysis?

(h)   What are pro-oxidants?

(i)   What do you understand by essential fatty acids?

(j)   What is synergism?

Section-B

2.   **Attempt any five questions. All questions carry equal marks.**   [5×10=50]

(a)   Discuss the causes of losses of vitamins and minerals during processing and storage of food.

(b)   What do you mean by refining of oil? Explain the refining process in detail.

(c)   Write an explanatory note on reaction flavor volatiles of foods.

(d)   Discuss the importance of moisture sorption isotherm in food processing and preservation.

(e)   Discuss the chemistry of frying. Also discuss the phenomenon of autoxidation.

(f)   Describe the effect of heat treatment on stability and nutritive value of food protein.

(g)   Discuss the functions of carbohydrates. Also comment on browning reaction.

(h)   Discuss the structure of chlorophyll. Comment on the preservation of green color in processed foods.

Section-C

Attempt any two questions. All questions carry equal marks.
$(2×15=30)$

3.   What do you understand by denaturation of protein? Also discuss the physical and chemical factors affecting denaturation.

4.   Discuss the modification of fats. Explain hydrogenation and inter-esterification in detail.

5.   What do you understand by RDA and RDI? Also discuss its uses and factors affecting the nutritional requirements of an individual.