

M.Sc. (Sem.-II) Examination

410

Food Sciences & Nutrition

FSN 410: Food Science and Food Microbiology

Time: 3 Hours]

May-2017

[Max Marks:70

Instructions:

All Questions are compulsory and carry equal marks
 Draw neat and labelled diagram wherever necessary

1. **Answer any two of the followings:** 14
- A) What do you mean by "Quality"? Explain types of quality criteria.
 B) Discuss concept of HACCP by taking a suitable example.
 C) What is plan stringency? Discuss limitations and problems involved in plan stringency.
 D) Distinguish between "Quality Control" and "Quality Assurance". Discuss any two aspects influencing quality assurance in food-processing industry.
2. A) Discuss various factors affecting microbial growth in food. 07
- OR
- A) What is fermentation? Explain production of cheese.
 B) Explain Prebiotics, Probiotics and Synbiotics. Discuss health benefits of probiotic foods. 07
- OR
- B) Explain microscopic methods used for microbial examination of food.
3. **Answer any two of the followings:** 14
- A) Explain classification of food in reference to shelf life with specific examples.
 B) Describe microbial spoilage of meat and meat products.
 C) Explain various microorganisms involved in different types of spoilage of vegetables and fruits.
 D) Discuss contamination and spoilage of cereals, cereal products and pulses.
4. A) Explain "Hurdle Concept" by taking suitable example. 07
- OR
- A) Explain principles of dehydration, concentration and modified atmosphere for preservation of food.
 B) Discuss use of high temperature methods for preserving foods. 07
- OR
- B) Discuss various types of radiations used for preservation of food.
5. **Answer very briefly:** 14
- A Name any two microbiological indicators of food contamination.
 B What do you mean by Water activity?
 C Name any two scientists and their contribution in discovery of food microorganisms.
 D Mention classification of sugar in respect to food.
 E Mention any two types of spoilage occurring in canned foods.
 F Name any two chemical food preservatives.
 G Explain role of cleaning and sanitation for food preservation.