

**CERTIFICATE PROGRAMME IN FOOD  
SAFETY**

**Term-End Examination**

**December, 2013**

**BFN-002 : HAZARDS TO FOOD SAFETY**

*Time : 3 hours*

*Maximum Marks : 100*

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*Note : Attempt five questions in all. Question No. 1 is compulsory. All questions carry equal marks.*

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1. (a) Enlist the different types of hazards. 4
- (b) Fill in the blanks : 6
- (i) Yeast grow best under slightly \_\_\_\_\_ medium.
- (ii) Bacterial food\_\_\_\_\_ refers to food borne illness caused by the presence of a bacterial toxin formed in the food.
- (iii) A disease is said to be\_\_\_\_\_ when it is common in the certain place.
- (iv) Free flowing salt has\_\_\_\_\_ agent added to prevent formation of lumps.
- (v) \_\_\_\_\_ substances are those where is used generally recognised as safe.
- (vi) \_\_\_\_\_ is one of the adulterant found in coffee.

- (c) Differentiate between the following sets of terms, giving examples. 10
- (i) Food contamination and Food adulteration.
  - (ii) Food infection and food intoxication.
  - (iii) Yeast and Molds.
  - (iv) Mycotoxins and Alfatoxins.
  - (v) Sequestrate and Antioxidants.
2. (a) Enumerate the measures you would adopt to safeguard the food from different hazards. 8
- (b) "Contamination of foodstuffs with chemical hazards can occur from various sources in the environment". Justify the statement giving appropriate examples. 12
3. (a) Give **two** examples for each of the following : 4
- (i) Pathogenic bacteria causing food poisoning.
  - (ii) Viruses implicated in food borne diseases.
  - (iii) Mycotoxins found in food.
  - (iv) Parasitic protozoa causing food safety problems.
- (b) Indicate the, sign, symptoms, food involved, route of transmission and preventive measures for the disease caused by each of the above mentioned situations (in part a). 4+4+4+4=16

4. Explain the following briefly : 5+5+5+5=20
- (a) Classification of bacteria according to the temperature at which they grow.
  - (b) Classification of bacteria based on their response to oxygen.
  - (c) Influence of hydrogen-ion concentration on growth of organisms.
  - (d) Measures to adopt for reducing exposure to mycotoxins.
5. (a) List some of the emerging pathogens of concern in the recent times. 3
- (b) Give the possible reasons for their emergence. 5
- (c) Discuss why these pathogens are a serious health hazard. 5
- (d) Briefly explain the measures which should be adopted to control or keep a check on these pathogens. 7
6. (a) What are food additives ? Why are they used in foods ? Briefly explain their functions giving examples. 14
- (b) Briefly explain the safety issues linked with food additives. 6
7. (a) List the natural occurring toxicants found in the following : 2+2=4
- Plant foods
- Animal foods
- (b) List the harmful effects of the toxicants found in the plant and animal foods. 8+8=16

8. Write short notes on **any four** of the following :

**5+5+5+5=20**

- (a) Metallic contaminants and their ill effects.
  - (b) Health hazards of pesticide residue
  - (c) Conditions when food is considered adulterated
  - (d) Anti-nutritional substances present in foods.
  - (e) Botulism
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