

00469

**CERTIFICATE PROGRAMME IN FOOD
SAFETY**

Term-End Examination

June, 2010

BFN-002 : HAZARDS TO FOOD SAFETY

Time : 3 hours

Maximum Marks : 100

Note : Answer five questions in all. Question number 1 is compulsory. All questions carry equal marks.

1. (a) Describe the relationship between the following sets of terms in *two to three* sentences each : **10**
- (i) Hazard-food safety.
 - (ii) Virus - physiological characteristics.
 - (iii) Protozoa - reservoir.
 - (iv) Temperature - Food poisoning.
 - (v) PFA - use of additives
- (b) Fill in the blanks : **10**
- (i) Amoebic dysentery is caused by the protozoan _____.
 - (ii) Water supplies need to be protected from _____ contamination.
 - (iii) The milk of animals can contain _____ residues.

- (iv) Epidemic dropsy is caused by consumption of _____ oil.
 - (v) Farm animals are referred to as _____.
 - (vi) Most disease causing bacteria grow best within a temperature range of _____ °C.
 - (vii) Paralysis of legs in young children is caused by the water-borne _____ virus.
 - (viii) Bacterial and fungal _____ are resistant to adverse environmental conditions.
 - (ix) _____ is associated with characteristic rice water stools.
 - (x) Food _____ should follow strict hygienic practices.
2. (a) Discuss the chemical hazards in food and their health effects in detail. 12
- (b) "Foods contain a wide range of natural chemical compounds that may act as toxicants or anti-nutritional factors". Explain this statement supporting your answer with suitable examples. 8
3. (a) Discuss the factors influencing the growth of microbes. 15
- (b) "By modifying the environment in which the microbes are growing, we can either kill the microbes or at least restrict their growth". Explain the statement in brief. 5

4. (a) How do viruses enter our food and water ? 5
Give suitable examples.
- (b) Discuss the symptoms, spread and 15
treatment of any three food-borne viral
infections.
5. (a) What are mycotoxins ? 2
- (b) Describe in brief the disease conditions 8
caused by aflatoxicosis.
- (c) Describe in brief the two types of ergotism. 2
- (d) What are the measures we can take to 8
reduce our exposure to mycotoxins ?
6. (a) List three emerging pathogens of concern 3
to food safety.
- (b) Discuss the nature of the causative agent, 7+7
the symptoms and transmission in the case
of any two of the pathogens you have listed
in (a).
- (c) What are the major reasons for the 3
emergence of these new pathogens ?
7. (a) What is a food additive ? 2
- (b) Discuss the functional role of food additives. 15
- (c) List the safety issues linked with food 3
additives.

8. Write short notes on *any four* of the following :
- (a) Metallic Contaminants. 5+5+5+5
 - (b) Food adulteration : Impact on the economic sector.
 - (c) Health problems caused by parasites
 - (d) Hazardous bacteria.
 - (e) Lathyrism.
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