

2014

M.Sc. Part-I Examination

DIETETICS AND COMMUNITY NUTRITION MANAGEMENT

PAPER—III (Unit-6)

Full Marks : 50

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Answer Question No. 1 and any four from the rest.

1. Answer any five of the following : 2×5
- (a) What is Synthetic media and how does it differ from complex media.
 - (b) Name one intrinsic and one extrinsic factor that are very important for controlling microbes in food.
 - (c) Define the Z value.

(Turn Over)

- (d) Name two predominant microflora of pasteurized milk and their sources.
- (e) What do you mean by Genetically engineered plant?
- (f) Mention four characteristics of food borne intoxication.
- (g) Mention the name of four foods that directly or indirectly can be contaminated with mycotoxins.
- (h) What is a GRAS-listed preservative?
2. Discuss the antimicrobial properties and any health concern of the following chemical preservatives and make list of two foods (for each) in which they are used :
- (i) NO_2 ;
- (ii) bacteriocins;
- (iii) benzoic acid.
3. What is HPP? Discuss why HPP treatment does not adversely affect the food quality. Mention the mechanism of microbial inactivation. Describe four other applications of HPP in food processing beside preservation.

3+3+4

1+3+2+4

4. Explain the mechanism of antimicrobial actions of irradiation by ray and UV light. Briefly discuss why irradiated foods are not commercially successful in many countries.

(3+3)+4

5. List the toxins associated with food borne botulism in humans. Describe the mechanisms by which the toxins produce does neurological symptoms and state how does it differ from infant botulism.

3+5+2

6. Mention the therapeutic and nutritional value of the fermented dairy products. Name two micro-organisms which are used as source of coagulants in cheese making.

4+4+2

7. Provide a general outline for isolation of food borne bacterial cells from meat and Poultry.

What is 'metabolic finger printing'?

Mention the immunoassays that are used for detection of Pathogen.

5+2+3

8. (a) "Food products as source of contamination"—Justify.
(b) State the basic differences between direct and indirect transmission of diseases in connection with public health.
(c) How will you detect the food-borne disease outbreak?
4+3+3
9. (a) State the role of microbe for the transgenic plant development.
(b) Write in brief about the nutrient up gradation of food by the implementation of knowledge of biotechnology.
5+5
-