

2016

M.Sc. Part-I Examination

DIETETICS AND COMMUNITY NUTRITION MANAGEMENT

PAPER—III (Unit-5)

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* questions from the following : 5×2
- (a) What is Pasteurization ?
 - (b) Why is smoking of foods considered as a form of cooking as well as preservation ?
 - (c) Give examples of *three* food preservatives.
 - (d) What are food sanitizer ?
 - (e) What is the full form of GRAS and NOEL ?
 - (f) Discuss the role of irradiation technology in food protection.

(Turn Over)

- (g) Distinguish between complete sterilization and commercial sterilization.
- (h) identify the key parameters in controlling the freezing process.
2. (a) Discuss about the physical principles involved in food processing operation.
- (b) What is HACCP?
- (c) Briefly discuss the methods used in reducing water activity.
- 5+2+3
3. (a) Provide an overview of the potential food safety issues linked to the technology of producing genetically modified foods.
- (b) Define the intrinsic and extrinsic parameters with respect to microbial growth in food.
- (c) Give example of two color additives used in food.
- 4+4+2
4. (a) Discuss the importance of food safety.
- (b) What do you understand by modified atmosphere packaging (MAP)?
- (c) Discuss, how several scenarios of cross-contamination occurs in food.
- 5+3+2

5. (a) What are Ready-to-Eat (RTE) foods? Discuss the precautions that are taken during the processing of RTE foods.
- (b) Identify the critical steps to control pathogen contamination levels of raw meats and poultry in the slaughter process.
- (c) What is the basic difference between food additives and food adulterants? Cite suitable examples.
- 4+4+2
6. (a) Explain the microbicidal effectiveness of ionizing radiation and identify its legal applications in food processing
- (b) Discuss the role of pulsed electric fields technology in food processing.
- (c) What is the importance of acidification in food processing?
- 5+3+2
7. (a) What do you understand by (aw)?
- (b) Write the basic differences between Conventional drying and freeze drying technology.
- (c) Briefly write the factors affecting microbial survival during hot and cold treatments.
- (d) What is the difference between 'decimal reduction time' (Dvalue) and 'thermal death time' (TDT)? How these values are helpful in thermal treatments?
- 2+2+2+(2+2)

8. (a) Write the significance of E-number of food.
- (b) Give two examples of Federal agencies associated with Food Safety responsibilities.
- (c) What is 'Food Code'?
- (d) Explain why the biological and non-biological factors of consuming molluscan shellfish make them inherently riskier in terms of foodborne hazards.

2+2+2+4

9. (a) Briefly discuss about the chemical methods used in food processing.
- (b) Explain with suitable examples, how food safety practices implemented throughout the food supply chain that made a difference in the rates of food borne diseases?
- (c) Enlist some of the chemicals used as food preservatives along with examples.

4+3+3