



ZIMBABWE

MINISTRY OF HIGHER AND TERTIARY EDUCATION

**HIGHER EDUCATION EXAMINATIONS COUNCIL
(HEXCO)**

NATIONAL CERTIFICATE

IN

**TOURISM AND HOSPITALITY MANAGEMENT, PROFESSIONAL
COOKERY FOOD AND BEVERAGE SERVICE AND BAKERY STUDIES**

SUBJECT: Nutrition and Hygiene

PAPER NO:335/S07

2011 SUPPLEMENTARY EXAMINATION

REQUIREMENTS

INSTRUCTIONS TO CANDIDATES

- 1. Answer ANY five (5) questions.**
- 2. Each question carries 20 marks.**

This paper consists of 3 printed pages.

Answer 5 questions, each question carries 20 marks.

QUESTION 1

- (a) Give two examples of Legal regulations applicable to food premises. (2 marks)
- (b) Outline the role of the Environmental Health Officers in relation to the inspection and closure of catering premises and the advantages of maintaining liaison. (8 marks)
- (c) Explain first aid treatment of ELECTRIC SHOCK in a food production kitchen. (7 marks)
- (d) List the components necessary for a fire to start . (3 marks)

QUESTION 2

- (a) Distinguish between exotoxins and endotoxins. (4 marks)
- (b) Identify and describe at least five factors which enhance the growth pattern of micro-organisms to dangerous numbers. (10 marks)
- (c) With the aid of a diagram, explain the different phases in the growth cycle of a bacterial colony. (6 marks)

QUESTION 3

- (a) Distinguish between direct contamination and cross contamination. (4 marks)
- (b) Specify the food in which the following food poisoning bacteria infest.
 - (i) *Bacillus cereus*
 - (ii) *Vibrio parahaemolyticus*
 - (iii) *Clostridium botulinum*
 - (iv) *Staphylococcus aureus*
 - (v) *Salmonella*
 - (vi) *Clostridium perfringens* (6 marks)
- (c) Describe the process in which bacteria multiply and name the process.

QUESTION 4

- (a) State any four functions of proteins. (4 marks)
- (b) Identify any four agents which cause the denaturing of proteins. (4 marks)
- (c) Identify and explain any five examples of micro-organisms which can be regarded as beneficial to human beings. (10 marks)

QUESTION 5

- (a) List the functions of water in the body. (4 marks)
- (b) Describe :
(i) Essential amino acids
(ii) Poly – unsaturated fats
Give examples of each (question 5bi and ii) (6 marks)
- (c) Compare and contrast between pernicious anaemia and megaloblastic anaemia. (4 marks)
- (d) Describe the effect of heat on ascorbic acid and protein. (6 marks)

QUESTION 6

- (a) Describe the nutritional requirements of a pregnant woman. (10 marks)
- (b) Suggest and describe the type of diet you would recommend for a child suffering from codic disease. (5 marks)
- (c) Plan a menu for a person adhering to a low fat diet.

QUESTION 7

- (a) Discuss *Staphylococcus aureus* and *Clostridium botulinum* under the headings:
(i) method of contamination (2 marks)
(ii) foods affected (2 marks)
(iii) symptoms of food poisoning (2 marks)
(iv) Time of onset (2 marks)
- (b) Evaluate the role of enzymes in food production. (4 marks)
- (c) Describe four (4) undesirable effects of enzymes in food. (8 marks)
- .../cn