

**PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)**

**MSc DEGREE EXAMINATION MAY 2019
(Second Semester)**

Branch - **CLINICAL NUTRITION AND DIETETICS**

DISCIPLINE SPECIFIC ELECTIVE ! : FOOD MICROBIOLOGY

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks!)

Answer **ALL** questions

ALL questions carry **EQUAL** marks (10 x 1 = 10)

- 1 Spoilage in food because of microbial activity can be prevented or delayed by _____.
 - (i) prohibiting the delay of microbes in food
 - (ii) physical removal of microbes
 - (iii) hindering the activity of microbes
 - (iv) all the above
- 2 The growth of aerobic food spoilage and pathogenic micro organisms can be suppressed by _____.
 - (i) Humectants
 - (ii) Exhausting
 - (iii) both (i) & (ii)
 - (iv) none of the above
- 3 The target microorganism in canning is _____.
 - (i) Clostridium botulinum
 - (ii) Streptococcus thermophilus
 - (iii) PA 369
 - (iv) Lactobacillus bulgaricus
- 4 In spore forming bacteria, maximum resistance occurs at P^H _____.
 - (i) 4
 - (ii) 5
 - (iii) 6
 - (iv) 7
- 5 The time required to kill microorganism at a given lethal temperature is known as _____.
 - (i) Z value
 - (ii) D value
 - (iii) C value
 - (iv) H value
- 6 The microorganism acetobactor aceti converts _____ into acetic acids.
 - (i) Ethyl alcohol
 - (ii) Glucose
 - (iii) Methyl alcohol
 - (iv) Starch
- 7 Two types of fermentations are carried out for the production of _____.
 - (i) Pickle
 - (ii) Yoghurt
 - (iii) Vinegar
 - (iv) Sausages
- 8 In bread manufacturing, alcoholic fermentation is carried out by _____.
 - (i) Streptococcus thermophilus
 - (ii) Saccharomyces cerevisae
 - (iii) S.carlsbergensis
 - (iv) Lactobacillus bulgaricus
- 9 The pathogenic bacteria in water that cause disease _____.
 - (i) Salmonella
 - (ii) Acetobacter
 - (iii) botulinum
 - (iv) None of the above
- 10 HACCP stands for _____.
 - (i) Hazard Assessment and Control Procedure
 - (ii) Hazard Analysis and Critical Control Points
 - (iii) Hazard Analysis and Control Points
 - (iv) Hazard Analytical and Critical Protocol

SECTION - B (35 Marks)

Answer **ALL** Questions

ALL Questions Carry **EQUAL** Marks (5 x 7 = 35)

- 11 a Explain the general characteristics, morphological features and biochemical activities of Mold.
OR
b Examine the structure and replication with particular reference to food borne viruses.
- 12 a Illustrate the growth curve of microbial cultures and its application in food preservation.
OR
b Discuss about the factors affecting microbial growth.
- 13 a Evaluate the microbiological quality of water.
OR
b Sketch on the microbial contamination and spoilage in vegetables and cereals.
- 14 a Discuss about the food borne disease Staphylococcal gastroenteritis.
OR
b Determine the salient features of food borne disease Salmonellosis.
- 15 a Explain the role of microorganisms in fermented foods.
OR
b Classify the micro-organisms and evaluate its application in food product development.

SECTION - C (30 Marks!)

Answer any **THREE** Questions

ALL Questions Carry **EQUAL** Marks (3 x 10 = 30)

- 16 Differentiate the morphological, biochemical characteristics and list of infections caused by bacteria and yeast.
- 17 Enumerate the techniques involved in control of microbial growth in foods.
- 18 Elucidate the types of spoilage caused by yeast, mold and bacteria on canned foods.
- 19 Evaluate the physical, chemical and immunological methods of detecting microbes in foods.
- 20 Assess the bacteriology of water and determine its sewage and waste treatments.

Z-Z-Z

END