FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA
DEPARTMENT OF MICROBIOLOGY
FIRST SEMESTER EXAMINATION, 2017/2018 SESSION
FOOD MICROBIOLOGY (MCB 412), 3 UNITS

INSTRUCTIONS: Answer **FIVE Questions** in All; **AT LEAST TWO** from each **Section**. .
.**Time Allowed: 2Hours**

SECTION A

1(a) Discuss extensively how the growth of microorganisms in food could be beneficial to man

1(b) What is the significance of nucleic acid probe in food microbiology?

2(a). Explain vividly how the control of water activity (a_w) would affect microbial activities in food?

2(b) (i) Mention six (6) routes of microorganisms in food
(ii) Discuss briefly the use of microorganisms as source of food for man

3(a). How does storage of dried food samples under high relative humidity (RH) affect microbial activities in food

3(b). Describe the biological and physical methods of preventing microbial activities in food.

4. Write short notes on the following methods of determining microbial load in food samples:
(i) Dye reduction
(ii) Direct microscopic count
(iii) Culturing technique

SECTION B

5(a). Differentiate between food borne infection and food intoxication and which of them is most harmful? Justify your answer with reasonable explanation.

5(b). Mention five (5) bacteria agent of food borne illness.

6(a). What are the intrinsic factors that influence food spoilage and how do they exert their effect

6(b). List the natural antimicrobial substance found in the following food:
(i) Fruit and vegetable
(ii) Oregano
(iii) Herb and spices
(iv) Garlic
(v) Basil

7(a). Aflatoxins are produced by which microbial genus? How do they affect man?

7(b). Why is fumonisins a concern? If improperly stored, what are the major foods and feeds that are likely to contain it?

7(c). What types of chemicals can be used to preserve foods?