CRAWFORD UNIVERSITY
FAITH CITY, IGBESA, OGUN STATE.
2016/2017 HARMATTAN SEMESTER EXAMINATIONS

COLLEGE: NATURAL AND APPLIED SCIENCES
DEPARTMENT: BIOLOGICAL SCIENCES
PROGRAMME: MICROBIOLOGY
COURSE CODE: MCB 409
COURSE TITLE – MICROBIOLOGY OF WATER, SEWAGE AND AIR
UNIT: 2 **TIME: 2 HOURS**
INSTRUCTION: ANSWER ANY *FOUR* QUESTIONS.

1(a). In Microbiological examination of water, state at-least *five* criteria for an ideal indicator organisms.
(b). Complete the table below:

Microorganisms	**Waterborne disease caused**
Bacteria	
Yersinia enterolitica	
Salmonella typhi	
Vibrio cholera	
Protozoa	
Cyclospora categanensis	
Naegleria fowleri	

2(a). State *five* ways of controlling airborne microorganisms.
(b). List out *five* bacteria, *three* fungi and *two* virus diseases of airborne origin.

3(a). Write short notes on the following tests
(i) PV (ii). BOD (iii). COD (iv). TOD (v). TOC (vi). ThOD
(b). State the sources of organic matters into drinking water

4(a). What are air-borne diseases?
(b). Write short notes on the following:
(i) Microbial mat
(ii) Brackish water
(iii). Coliforms
(iv). Potable water
(v). Biogas production

5(a). Name the different tests for microbiological examination of water.
(b). Highlight the various processes used in sludge treatment.

6(a) with the aid of a well annotated diagram, explain conventional sewage treatment.
(b)Write short notes on the following:
(i) Biofilms (ii) Heterotrophic plate count (iii) Aeromicrobiological pathway
(iv) Disinfection (v) Ozonation.