



NATIONAL OPEN UNIVERSITY OF NIGERIA
Plot 91, Cadastral Zone, Nnamdi Azikiwe Expressway, Jabi- Abuja.
Faculty of Health Sciences
Department of Environmental Health Science
2021_2 EXAMINATION

Course Code: EHS 409

Course Title: SEWAGE AND WASTE WATER TREATMENT

Course Unit: 2 Credit Units.

Time Allowed: 1 ½ Hours.

Total Score: 70 Marks.

Instruction: Answer All Questions.

Question 1.

Of all the analytical methods of assessing waste water quality, the BOD₅ and TSS are most popular.

- a. List what BOD₅ measures; the temperature involved; the time duration; and the unit of expression **(10marks)**.
- b. List what TSS measures; the temperature involved; the medium used; and the unit of expression **(10marks)**.

Question 2.

Technology is advancing in all fields including Environmental Health.

(a). Briefly explain four (4) advanced wastewater treatment methods you know. **(10marks)**.

c). Highlight the major principles in the Activated Carbon Filtration Process. **(20 marks)**.

Question 3

- (a) List the processes involved in a wastewater treatment plant from the inlet to the outlet of the final effluent. **(5marks)**
- (b) State four (4) advantages of grit removal process in wastewater treatment. **(10marks)**
- (c) At various stages in wastewater treatment process, sludge will result. This sludge needs to be treated also before disposal. Mention at least 5 sludge treatment processes. **(5marks)**.