



**FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA**  
**DEPARTMENT OF MICROBIOLOGY**  
**SECOND SEMESTER EXAMINATION, 2019/2020 SESSION**  
**MCB 324 (MICROBIOLOGICAL TECHNIQUES) (3 CREDIT UNITS)**

**INSTRUCTION: Answer any 4 questions in all, two from each section.**

**TIME: 2hours 30 min.**

**SECTION A**

- 1(a). What is culture media?
- 1(b). With one example each, give the classification of culture media.
  
- 2(a). Define pure cultures.
- 2(b). Enumerate the methods used to derive pure cultures.
  
3. Write very short note on the following:
  - (i) Turbidimetric measurements
  - (ii) Gram staining
  - (iii) Citrate utilization test

**SECTION B**

- 4(a). Explain microbiological Assay and types
- 4(b). Explain microbiological techniques
  
- 5(a). Explain step by step content a scientific writing
- 5(b). Discuss serology
  
- 6(a). What is a buffer solution
- 6(b). How will you adjust a solute to be a base or an acid