



NATIONAL OPEN UNIVERSITY OF NIGERIA
Plot 91, Cadastral Zone, Nnamdi Azikiwe Expressway, Jabi - Abuja
Faculty of Science
DEPARTMENT OF BIOLOGICAL SCIENCES
2024 1 EXAMINATION

COURSE CODE: BIO 303

COURSE TITLE: GENERAL CYTOLOGY

GCREDIT: 3 Units

TIME ALLOWED: 3 Hours

INSTRUCTION: Answer Question ONE (1) and any other THREE (3) Questions

- 1a. State the Advantages and Disadvantages of Phase Contrast Microscope? (12mrks)
b. Explain the Principle of Dark Field Microscope? (8mrks)
c. Briefly discuss the History of Autoradiography? (5mrks)
- 2a. Describe the Newer Tools and Techniques Used in Cell Biology? (8mrks)
b. Highlight the concept of Cell Culture Studies? (7mrks)
3. Write short note on the following biomolecules and their roles in cell structure?
(i). Water (5mrks)
(ii). Proteins (5mrks)
(iii). Carbohydrates (5mrks)
- 4a. Mention the two types of Nuclei acid? (3mrks)
b. Discuss the concept of M Phase in cell cycle (9mrks)
c. List the three major control checkpoint that exists during the course of the eukaryotic cell cycle? (3mrks)
- 5a. Briefly discuss the growth and differentiation in Embryonic Cell? (10mrks)
b. Outline the event that occurs in the progression of foetal development in humans? (5mrks)
- 6a. Explain briefly the growth and differentiation in Plant Cell Wall? (10mrks)
b. Briefly discuss the stages of embryogenesis? (5mrks)

Total marks = 15mrks